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**THE RELATIONSHIP BETWEEN
COMMUNICATION, STRESS AND GENDER IN
THE PORTUGUESE TEXTILE INDUSTRY**

Ph.D. THESIS

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**THE RELATIONSHIP BETWEEN COMMUNICATION, STRESS
AND GENDER IN THE PORTUGUESE TEXTILE INDUSTRY**

by

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To Rui and Bruno

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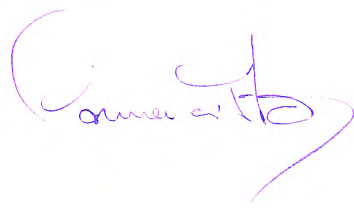
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Author's Declaration

This Thesis has not been nor is currently being submitted for the award of any other degree or similar qualification.

A handwritten signature in purple ink, appearing to read "Carmen A. H." with a stylized flourish extending from the end.

Preface

Portuguese Textile Industry

This thesis will analyse the relationship between the verbal and non-verbal communication of men and women in two Portuguese textile organisations. Thus, it would be important to start this thesis with an introduction to the current situation of the Portuguese textile industry.

The textile industry in Portugal dominates the economy. In 1992 it represented 30% of Portuguese exports (Brandão et al, 1998, European Community Commission¹, 1998, Portela, 1990). It is characterised by small and medium, family companies that have a tradition of exportation, especially exports to Great Britain and central Europe (Jornal de Notícias, March 2000). This type of industry is concentrated in the north of Portugal, especially in Braga and Porto. These industries, and especially those in the Vale do Ave region, are very important to the northern economy. Here the economy relies 77% on the textile industry (European Community Commission, 1998), and it absorbs 70% of this region's employment (Ministério das Finanças e da Energia, 1994).

The 1980's were the golden years for this industry, and Portugal increased its exports, selling its products to other EC countries, Scandinavia and the United States (Associação das Indústrias de Malha e Confecção, 1999). Textiles were considered to be the "leader" of the Portuguese exports (Mesquitela, 1983a). During this decade the textile industry was growing at an average of 10% every year, and there was an exports increase of 1.6 billion USD between 1983 and 1989. (European Community Commission, 1998, report based on the data from the INE-National Institute of Statistics) However, the Portuguese textile industry was based on a non-qualified workforce, on the devaluation of the escudo, on low wages costs, on bank loans, on subcontracts, and textile industries were not able to develop their own designs (Fernandes, 1996). Not surprisingly, this model of industry was not able to survive for long.

When Portugal entered the European Community in 1986, the vulnerability of the textile sector started to be evident (Fundo Europeu de Desenvolvimento Regional,

¹ In the References this will appear as Comissão da Comunidade Europeia

1998). The consequent opening up of new European markets and GATT, the pressure from banks (Fernandes, 1996), associated with the small dimension of the Portuguese economy, along with the openness to globalisation of the economy showed the high sensitivity of the Portuguese economy in relation to the international competitiveness—these industries were not ready for internationalisation (Brandão et al, 1998). The scenario was aggravated by a general international crisis caused in part by the dismantling of the Berlin wall in October 1989 and the changes this caused in the European economy, the Gulf war in 1991 and the drastic rise in petroleum prices (Brandão et al, 1998), but above all of Asian low market prices, resulting from cheaper rents and land, cheaper raw materials and cheaper workforce. The Portuguese market was not large enough to absorb the production, and as there were no governmental rules protecting the market from outside products, the big stores preferred to buy textile products from the Asian manufactories (Fernandes, 1996). These countries as well as those from the west were producing products with similar quality but lower prices. Consequently the prices that were offered by the Portuguese companies were not an advantage anymore (Portela, 1990) The textile industry was going through a general crisis, and a large number of industries had to close their doors (Fundo Europeu de Desenvolvimento Regional, 1998).

In the beginning of the 1990s, in the presence of the above described scenario, the Portuguese textile industry suffered a predictable decrease in production and exports; in 1992 there was a 4.2% decrease in production, and in 1993 production decreased more than 11% (European Community Commission, 1994).

The Portuguese government asked the European Community for help. The European Union funds that were provided were intended to bring major improvements to several economic sectors, helping some companies to modernise their equipment and providing them with money that helped them restart (Associação Nacional da Indústria e do Vestuário, 1998). Between 1988 and 1993 industry, including the textile sector, benefited with funds from several programmes such as the PEDIP, the SIBR or the RETEX that provided 78 thousand million escudos (European Community Commission, 1994).

However, it seemed that this help was not enough. As indicated above, the industry suffered from a general crisis in the beginning of the 1990s. The government concluded that this sector needed special attention (Fernandes, 1996). A programme was then especially designed for the textile industry. This programme is designated IMIT - 1995/1999- Iniciativa para a Modernização da Indústria Têxtil². The community would provide a maximum of 400 million ECUs so that the programme could be successful (European Community Commission, 1995). It aimed to give dynamism and to modernise the textile sector. This programme intended to give the textile industry an international profile, as well as representation in international trade markets. It also wanted to help industries diversify their production, not producing those products that are more easily produced in countries with a cheaper work force. It intended to improve the know-how in design, quality and marketing and to improve the work force qualifications (Fundo Estrutural e Comunitário, 1994). According to António Falcão (2000), the Minho Industrial Association (AIM- Associação Industrial do Minho) president, the IMIT spent 112 thousand million escudos, between 1995 and 1999, for the modernisation of this industry (Semanário Económico, March 2000). Modernisation of equipment is considered to be one of the more important measures because the competitiveness of textiles produced in Portugal cannot be based on low prices any longer (Associação Nacional da Indústria do Vestuário e Confecção, 1998).

It is true that this industry is still making a big effort to survive but there are still some prevailing problems like the incapacity to compete in bigger and more distant markets such as the United States or Brazil; in some cases the companies still do not receive direct contracts, but they receive sub-contracts (Fernandes, 1996). Some companies still have inadequate marketing and advertising policies; as well as deficient human resources policies, and some also still have difficulties in the acquisition of a qualified labour force (Diário de Notícias, March 2000). Mesquitela (1983b) pointed to the necessity of a qualified workforce and to the necessity of developing professional training and the creation of more superior textile degrees.

As a consequence of the funds provided by the European Community, companies could be more competitive, and started offering more quality as a result of

² Textile industry Modernisation Initiative

the introduction of new technologies and the qualification of the workforce. Although the prices were higher than those offered by Asian countries, Portuguese companies started to offer greater quality based on a series of European standards, increasing their sales and surviving in a market that is becoming more and more complex and "devouring" (Fernandes, 1996). In order to improve quality in this type of industry the "Minho- Pólo de Excelência Têxtil"³ project was created in 1999, by the Minho Industrial Association. This project not only wants the modernisation of this industry, it also intends to attract foreign investment; as well as to improve this industry image outside Portugal; reinforcing its credibility (Seminário Económico, January 2000). This industry is also helping to reduce unemployment in the north of Portugal. According to a national newspaper that used the National Institute of Statistics as a source, unemployment in this geographical area decreased from 5.5% in 1993 to 4.2% (0.2% lower than the general unemployment percentage) in 1998, and according to the same article, local employers frequently complain they cannot find employees to work at their textile companies (Semanário Económico, March 2000).

The textile industry is an important sector in the Portuguese economy, especially in the north of the country. The researcher had worked for some time in this industry and was aware of its complexities and problems that have been experienced over the last ten years. There were several reasons why the researcher found it important to analyse this type of industry:

First, it seemed that this industry was an under-analysed field of study especially its social and psychological elements. Studies that have been done in this type of industry have concentrated on the analysis of the economic evolution of the sector (e.g. Fernandes, 1996, Brandão et al, 1998, Portela, 1990, Mesquitela, 1983a and b).

Second, this study could help better understand the way this traditional economy sector works in terms of communication and relationships between employers

³ "Minho- Textile Excellence Unit"

and employees, and how the employees' levels of stress are being affected by these.

Third the results of this study could help to create new attitudes in an industry that needs to create an image of quality. According to the researcher a way to achieve this image is to have a satisfied workforce, characteristic of a modern society, that sees the workplace as agreeable, pleasant, friendly and challenging. Because tradition does not have to be synonymous with the past, the researcher believes that the modernisation of this sector would benefit from a detailed analysis of the communication processes.

Fourth, in comparing a small and typical family company, with one of the biggest textile companies operating in Portugal, it would be possible to discern the way small and large companies deal with their employees, especially in what influences the methods used to communicate and the efficiency of those methods.

Introduction

This thesis analyses the relationship between organisational verbal and non-verbal communication and the levels of occupational stress felt by Portuguese textile industry workers. It also documents employers' and employees' perceptions of the quality and quantity of verbal communication within two companies.

From the outset it was clear that to analyse the relationship between these two variables specific instruments were needed. Two questionnaires were designed: one that analyses the quality and quantity of organisational verbal communication and one that measures the levels of occupational stress felt by the employees. As non-verbal communication was also going to be analysed, a non-verbal communication checklist was constructed. These methods would allow the capture of the diversity of the verbal and non-verbal elements and would permit consistency across organisations. The verbal communication questionnaire was also modified and adapted so that it could be given to managers, and the perceptions of managers and employees could be compared.

The entire study was developed so that it was possible to test some initial hypotheses. The hypotheses were subjected to an extended quantitative analysis of the answers provided by employees and employers who agreed to participate in this study.

Chapter One is concerned with the analysis of one variable considered in this thesis, i.e. stress. The chapter starts with an analysis of stress concepts and models. A discussion of reasons why stress needs to be analysed and studied follows. Several individual and organisational factors are presented here. This chapter also analyses the measures that have been taken by the European Commission and the Portuguese government in order to reduce the levels of stress at an organisational level. This is followed by a general literature review of stress. The review suggests that researchers in the field of stress have not considered communication to be a determinant stressor.

Chapter Two starts with the presentation of the origins of the study of organisational communication and its place in organisational theories, showing that this has often not been considered by those who analyse the organisational phenomenon. A

demonstration of the importance of the study of organisational communication follows. Here it is emphasised that this element has been frequently forgotten by those responsible for the development of communication policies within organisations, and how detrimental this omission may be. The chapter then considers verbal communication studies, and concludes that communication has never been studied together with occupational stress. The chapter also analyses the importance of non-verbal communication cues, explaining a new concept of 'space' and referring to Foucault's "Panopticon". Finally, the chapter analyses the elements and the importance of downward and upward communication within an organisation.

Chapter Three introduces the reader to another important field- the analysis of gender differences in the perception of stressors and the level of stress felt. The chapter reviews the literature on gender and stress and discusses explanations that have traditionally been given to explain existing or possible differences.

Chapter Four describes not only the methods used, but also the reasons for the use of these methods. The chapter explains the choice of industries and the methods used for data collection relating to verbal communication and non-verbal communication. The chapter describes how the Organisational Verbal Communication Questionnaire, the Work Stress Questionnaire, and the Non-verbal Communication Check List were constructed, and how the interviews and observations were carried out. It finishes with a description and characterisation of the subjects.

Chapters Five and Six contain the results. Chapter Five presents the results related to the relationship between verbal communication and levels of stress, in both men and women, and reports employees' and employers' perceptions about the quality and quantity of organisational verbal communication. Chapter Six reports the results from the analysis of non-verbal communication.

Finally, chapter Seven discusses the results reported in the previous chapters and outlines some final considerations about what has been studied and needs to be changed.

It points the weaknesses of this thesis, as well and points to avenues of study. The chapter finishes with some conclusions and the presentation of the model which summarises the proposed relationships.

The appendix contains a copy of the Organisational Verbal Communication Questionnaire designed for the employees and another designed for the managers, a copy of the Work Stress Questionnaire, both in Portuguese and in English. The reader can also access a copy of the Non-verbal Communication Check List, in both languages; and the rating scale that was used to analyse the Organisational Verbal Communication Questionnaire along with the Work Stress Questionnaire. A table of raw data that includes the results from all the employees that participated in this study is also included.

Chapter 1

Occupational Stress

1.1 Stress Concept and Models

There is some confusion and lack of agreement around the meaning of stress. There are two reasons why this thesis starts by reviewing a group of approaches to and definitions of stress. Firstly, a review of several hundred articles and books revealed that the definitions and terminology connected with this subject is not only voluminous but sometimes contradictory. The term has been used under diverse circumstances denoting several different meanings. Experts are not always in agreement as to what concerns the concept of stress (Humphrey, 1998). Secondly, despite the vagueness of the concept and disagreement about the best way to measure it, including for example the diary method, the questionnaires and scales, and the physiological measures (e.g. Ptacek et al, 1992, Chandraiah et al., 1996, Langan-Fox and Poole, 1995, Motowidlo et al., 1986, Peter, 1995, Fox and Dwyer, 1995, Frankenhauser et al, 1989) studies of stress have become widespread in organisational (e.g. Hardy et al, 1998, Cartwright and Cooper, 1997, Aiello and Kolb, 1996, Chandraiah et al, 1996) and medical literature (e.g.. Girdler, et al., 1990, Agius et al, 1996, Langan-Fox and Poole, 1995, Richardson and Burke, 1991).

1.1.1 The antecedents

There is a group of approaches to job stress that can be considered historical antecedents to today's definitions and theories of job stress and these have, at times, contributed to the current state of confusion around the topic. The medical approach, which has its historical roots in Cannon (1914) and Seyle's (1975) work, typically focuses on physical stressors and physical strain as the outcome and the professional response focuses on the individual through the application of medication. It is important to note that this approach did not develop with a primary interest in organisations, although it is sometimes applied to them (e.g. Girdler et al, 1990). This approach focuses on physical stressors such as unusual temperatures or noise, and expects these

stressors to cause physical outcomes to the individual such as hypertension or increases in epinephrine or norepinephrine levels in the blood stream or urine (Beehr and Franz, 1987). The approach is individual and not organisational- if the person has hypertension, they use medication to treat the person and reduce the hypertension. They do not act directly in the organisation and try to reduce the stressors that caused the hypertension. The clinical psychology approach is similar to the medical approach, the difference is that it tends to focus on psychological stressors, and on psychological outcomes. The treatment is also focused on the individual, this time through the use of counselling or psychotherapy. This has not been developed specifically to be applied to the workplace, but it often is (e.g. Abush and Burkhead, 1984, Orpen, 1982, Javaratne and Chess, 1984). The engineering psychology model focuses on physical stressors, and job performance as the outcome (e.g. Broadbent, 1954, Aiello and Kolb, 1996, Meese et al, 1984). Finally, organisational psychology, with its roots in Kahn's 1960's work, identifies the same stressors and outcomes as clinical psychology. However, they differ in the target of treatment; clinical psychology has the individual as the target, while organisational psychology has the organisation as the target of treatment (e.g. Parker and DeCotiis, 1983, Fox, and Dwyer, 1995).

1.1.2 The definition

The word "stress" is derived from the Latin word *stringere*, meaning to draw tight. During the 18th century the word was used to mean "force, pressure or strong effort" referring primarily to an individual's mental powers (Hinkle, 1973). Under the influence of early definitions of strain and load used in physics and engineering, some researchers began to claim that it was possible to measure the stress to which an individual is subjected in a similar way as it is possible to measure physical strain in a machine (Cartwright and Cooper, 1997). While one concept looks to stress as an outside stimulus, i.e. it sees stress as a environmental force that reduces individuals' physical and/or psychological functioning, destabilising and producing a strain within the individual: a second concept looks to stress as a person's response to a disturbance, i.e. as a result of the individual capacity to cope with external stimuli.

The European Foundation of Living and Working Conditions (1994) defines stress as the "body's strategy for adapting to whatever influences, changes, demands and strains it encounters". The same source says that this strategy swings into action for a number of reasons if the person is for example assaulted in the street or insulted by his/her boss, or is expected to achieve something when he/she doubts that he/she can, when the individual worries about his/her job, or when the individual needs a certain amount of responsibility, but his/her job offers less, or demands more; when the person needs a certain amount of work, but often gets too much, or when the person is threatened with unemployment. Thus one cause of stress at work is an inadequate fit between the work and the individual (e.g. Abush and Buckhead, 1984). The European Foundation says that "something common to all these cases is the way the individual's body attempts to adapt. This common denominator - a kind of "revving up" or "stepping on the gas" - is stress." (p.4⁴). The commission argues that when the individual feels in control, stress becomes the "spice of life" but when the person loses this sense of control, stress becomes a threat. So, stress results from the relationship between the person and the environment. This view is shared by the models that are examined in the following pages.

1.1.3 The models

Dohrenwend et al's (1982) model states that life events are very important. They are viewed as determined by circumstances in the environment and characteristics of the individual. Some environments generate more of these events (e.g. birth of the first child, death of a loved one) and some people are more 'event prone' than others. Stressful life events are seen as determined by both circumstances in the environment and characteristics of the individual. Some environments generate more stress than other

⁴ European Foundation of Living and Working Conditions (1994), Stress at Work: Does it concern you? Office for Official Publications of the European Communities, Ireland

environments and some individuals are more influenced by some events than others. The way individuals face the stressful events is, according to this model, mediated by factors such as support, individual aspirations and values, or coping abilities. This model shares the view that stress results from both the environment and individual characteristics. Other models maintain this position. According to Elliot and Eisdorfer's (1982) model, stress results from the interaction between the individual and the environment, and is the result of three elements: (1) something in the environment that becomes a stimulus, (2) individual reactions to that stimulus, and (3) the consequences of those responses. They also talk about mediators between the initial reaction and the final consequence. These mediators can be biological, psychological or social. These three mediators explain individual differences in the reaction to the same stressor. However, this is a very general model that does not specify the variables included in each of the categories of mediators and consequences.

Lazarus and Folkman's (1984) stress model states that the relationship between the person and the environment is very important. They talk about external conditions, or 'daily hassles', as being stressors and highlight the importance of cognitive factors as mediators of such external events and the physical and psychological consequences. Although Lazarus emphasises the centrality of the cognitive process, once more stress is seen as the result of environmental and personal characteristics.

Ivancevich and Matheson's (1980) model proposes that there are a group of stressors that can be both intra-organisational (including physical environment, individual group level, individual level or organisational level) and extra-organisational. These are antecedents to stress, but they can be mediated by individual cognitive and affective differences, e.g.. personality type, loci of control, tolerance of ambiguity, needs' levels and self esteem. Then as a result of stress there are a group of physiological (e.g. blood pressure and blood glucose) and behavioural (e.g. life performance and turnover) short-term outcomes. There is also a group of mediators between stress and the outcomes. These mediators are individual differences relating to age, education, occupation, total hours worked and health status.

In accordance with a comprehensive occupational stress model developed at the University of Michigan Institute for Social Research (ISR) (e.g. Israel and Schurman,

1990), occupational stress is seen as a complex and dynamic process in which stressors, perceived stress, short-term responses, and modifying factors all affect each other and impact on long-term health. Using Reilly and Clevenger words (cited in Langan-Fox and Poole, 1995, p. 113) "stress could be said to occur when there is an imbalance, either real or perceived, between environmental demands and the response capability of the individual".

Another ISR model is the one presented by Kahn and Byosier (1990). The model considers the existence of organisational antecedents to stress such as organisational size, work schedule. Kahn et al. (1964) reported that in a national survey where workers estimated the size of their organisations, there was a relationship between size and reported job tension. The organisational antecedents influenced a group of stressors in organisational life (here stressors work as a dependent variable), that can be physical (e.g. noise, light). The author refers to a study carried out by Meese et al (1984) where it was reported that with temperatures of 20-38°C there was a curvilinear pattern of performance, with performance peaking under conditions of mild heat - 32° for men and slightly higher for women. The organisational antecedents could, according to this model, also be psychological (e.g. role ambiguity, role conflict). Here Kahn refers to studies carried out by researchers such as Chonko (1982) that show how role ambiguity and role conflict work as stressors. Chonko reported high rank-order correlations between span of control (size of role set) and magnitude of role conflict and role ambiguity among sales representatives.

The model also proposes that there are a group of factors that are mediators between these stressors and the short and long-term consequences of these stressors. There are three groups of mediators: the properties of the person as a stress mediator (e.g. type A/B, locus of control, demographic characteristics); the perception and cognition, (e.g. the process of appraisal) and the properties of the situation (e.g. supervisor social support, and co-worker social support). The Vinokur et al (1990) study of patients with breast cancer illustrates the importance of appraisal. In this study appraisal was an important predictor of anxiety. From the balance between the group of stressors and the mediators there are the immediate responses to stress that can be physiological (e.g. cardiovascular, biochemical), psychological (e.g. depression, job satisfaction) and behavioural (e.g. turnover). These lead to ramifying or long-term

responses to stress, that can affect health, organisational effectiveness and performance in life roles.

These models do not allow the complete understanding of the phenomenon of organisational stress and they do not explain all the relationships between stress and the organisational variables that explain it. Although some of these models are more specific, and although some identify more variables than others, none of them analyses communication as the main variable influencing organisational stress. Despite the differences among these models, especially in what concerns terminology and length of causal sequence, there are some convergent points among these models that can help researchers to understand the relationship proposed by this thesis. All these models predict that stress results from both something in the environment and something in the individual. They predict the existence of damaging environmental stimuli, and they also predict the existence of a group of individual responses. The model that will be presented in this thesis is also based in the idea that stress is caused by both environmental and individual factors. The damaged environmental stimulus that is considered here is organisational communication deficits and problems. In the next chapter we will consider the argument that this represent an important aspect of organisations and impacts on individual well being. The individual characteristic responsible for different appraisal of communication problems, considered in this thesis, is gender (this point will be explored in chapter 3). Finally, all the models predict a group of consequences.

The consequences of stress will be further explored in the following section as the main reason why stress has to be studied and understood at both an individual and organisational level.

1.2 Why should we study stress?

The reason for studying stress is explained by the fact that occupational stress causes major problems for employees, in particular (Orpen, 1982, Hurrell, 1985, Fusilier et al, 1987, Javaratne and Chess, 1984, Mossholder et al, 1982, Gronkvist and Lagerlof, 1997, Gronkvist and Lagerlof, 1997, Mott, 1976, Howard et al. 1986), and for organisations, in general (Parker and DeCotiis, 1983, Chen and Spector, 1992, White, 1997).

From the literature review one can conclude that organisational stress results in high costs to both the individual and the organisation. Individual costs include health outcomes- such as backache, skin rash, tiredness, eye problems, high blood pressure (e.g. Orpen, 1982), anxiety (e.g. Hurrell, 1985), depression (e.g. Fusilier et al, 1987), irritation (e.g. Javaratne and Chess, 1984), muscular pain and tension (e.g. Mossholder et al, 1982); stomach and intestinal dysfunction such as indigestion, vomiting, heartburn and constipation (e.g. Gronkvist and Lagerlof, 1997). Cardiovascular symptoms, such as palpitations and breast pain (that according to the Euro Review, in 1997, is four times higher in the work plan than in the general population); lung problems, such as problems in breathing, asthma and rapid and deep breathing; central nervous system dysfunction, such as mental and emotional disorders, sleep disturbances, fainting and headaches (e.g. Gronkvist and Lagerlof, 1997), and sexual problems, such as painful menstruation, frigidity and impotence (e.g. Mott, 1976). Stress works as a trigger, and it directly or indirectly aggravates some symptoms and can trigger changes in the body's defence mechanisms. It can also increase unhealthy habits such as smoking, drinking, or lack of exercise, and some of these processes may be irreversible (e.g. Howard et al. 1986).

There are also organisational costs, such as high rates of absenteeism and staff turnover (e.g. Parker and DeCotiis, 1983), poor industrial relations, high accident rates, poor organisational climate, antagonism and low job satisfaction (Chen and Spector, 1992). According to White (1997) organisations whose members suffer from stress have more sick days, higher worker compensation claims, higher on-the-job accidents and

injuries, and higher numbers of employees who suffer from stress related disorders. They have higher employee complaints, decreased productivity, increased tardiness and absenteeism, increased conflict and strikes, emotional detachment and low morale.

Evidence from different sources indicates that workers in increasing numbers are falling victims to stress at work (e.g. Cartright and Cooper, 1997) and large numbers of people around the world find their jobs stressful or the single greatest cause of stress in their lives (Beehr, 1995).

Stress is a growing problem in European working life. In 1997 the European Foundation completed the Second European Survey in which 15,000 workers of the 15 EU member states were surveyed. This survey found that more than one in four workers feel stressed, that one in five feels tired most of the time, and one in eight has headaches. The survey also showed that a rapid pace of work is a problem, especially in some sectors, for example in industries, agriculture and restaurants, and especially in Sweden, Germany, Netherlands and Finland. The survey also shows that 33% of European workers have no control over the order in which their job tasks have to be carried out. More than 30% cannot pause when he or she needs to, and 40% cannot choose when to have vacations or take a day off. Almost 50% of workers have monotonous jobs, especially in Spain, Greece and France. Training, which is considered to reduce the level of anxiety in new responsibilities, received little attention, with 70% of the workers receiving no training in the previous twelve months. This was especially true in Belgium, Greece, Italy, Spain and Portugal (Euro Review, 1997) The European survey on Working Conditions also reveals that 9 to 12% of men and 9 to 11% of women in EU countries are exposed to high work strain for most of the working day, with high figures in Germany, Greece and the Netherlands, and low scores for Italy and Portugal. (Jensen, 1997)

Dhondt et al (1995, cited in Levi and Jensen, 1996), in a report for the European Foundation for the Improvement of Living and Working Conditions, using a combination of tight dead lines and low autonomy as their study criteria, found high figures (15%) for men in Germany and Greece, and for women in the new German Länder. The same source says that low figures were found for men in Italy and Portugal and for women in the Benelux countries. The average results show that 12% of men and

9,2% of women work under tight deadlines and have no autonomy. According to Levi and Jensen's analysis high scores were found for both men and women in the länder and Greece, among women in Netherlands and among men in West Germany. Low scores were found for women in Luxembourg and Belgium and for both men and women in Italy and Portugal.

As a result of these negative consequences, European and American countries are spending large amounts of money.

"Because U.S. employers are directly responsible for employee healthcare costs, it is relatively easier to quantify these costs than in European economies, where a substantially greater burden is still met through more dispersed state funded welfare and health services and other agencies. The financial cost may be more dispersed and more difficult to measure and quantify within the European Union, but nevertheless they exist" (Kompier and Levi, 1996, pp 3)

In the U.K. alone, stress and related diseases account for at least half of premature deaths (Palmer, 1989), 360 million working days⁵ are lost, equivalent to £8 bn. It has been estimated by the Health & Safety Executive that at least half of these lost working days are related to workplace stress. (Kompier and Levi, 1996). It has also been documented that U.S. industries lose approximately 550 million working days every year as a result of absenteeism (Harris et al, 1985, cited in Kompier and Levi, 1996). According to Elkin and Rosh (1990, cited in Kompier and Levi, 1996) 54% of these cases are stress related. Recent European studies give some indications of the costs of stress. According to a report (CEC, 1982, cited in Kompier and Levi, 1996) approximately 8.000 people die each year in Europe as a result of occupational accidents and disease, 10 million suffer some form of work related accident or disease; the compensations for these injuries and illnesses is estimated at €20,000 million. The 1992 European Commission survey found that 48% of respondents considered that their work affected their health, of which 42% referred to stress. (Kompier and Levi, 1996)

⁵ The costs of health care and rehabilitation are measured by market prices. The costs of sickness absence, early retirement and death are measured by the loss-of-potential-output (production), i.e. the value of a working week is assumed to be the same as the average working week of that country. (Jensen, 1997)

It is hardly surprising, therefore, that during the last twenty years there has been an increasing number of publications addressing interventions intended to prevent work related illness, especially in relation to stress related diseases. This fact has received attention by authors such as Spielberger and Reheiser (1995), who reported the increasing number of publications listed in *PsycLit* between 1971 and 1992. What is surprising is that this increasing investigation has resulted in little agreement about the causes of occupational stress. The ability of an organisation to manage stress in the workplace is dependent on its ability to diagnose those aspects which employees find stressful. Stressors may include major life events (e.g. Wagner and Compas, 1990) Dohrenwend et al, 1982), daily hassles (e.g. Lazarus and Folkman, 1984), chronic strains (e.g. Gronkvist. and Lagerlof; 1997) and a number of organisational events and characteristics (e.g. Frone et al, 1995, Chandraiah et al, 1996, Fox and Dwyer, 1995). Here attention will be paid to those factors that have been considered by several researchers as being the main cause of occupational stress. First, an analysis of what is being done by the European Commission and by the Portuguese government will be considered, and then some of the studies will be reviewed so that it is possible to analyse what each author considers to be the main causes of occupational stress and to see if everything has been explained in the field of stress theory. Clearly it is not possible to list all studies, however there will be an attempt to refer to those that seem to be the most important, i.e. those which other authors found to be significant to the people who work in different organisations.

1.3 What are the European Commission and the Portuguese government doing?

What a government or a community does to protect their citizens' health and well being, that is, the money they spend on health policies and on education regarding measures to protect health, can give an idea about the way industries protect their employees. If there are measures and adequate legislation, employees are more protected. As previously stated, stress affects employees' health. Consequently, and before going through the analysis of a particular group of industries, it would be important to have a general idea about what the European Commission and the Portuguese government are doing to avoid and reduce stress. Governments and organisations that desire their employees' physical and psychological well-being must have policies and procedures that address their health and safety. These policies would include procedures to manage stress, and these procedures are supposed to include the organisation and its members' needs. Governments and organisations must consider stress prevention not only as a way to reduce costs, but as a way to promote and create health and thus improve productivity.

1.3.1 The European Commission

The European Foundation of Living and Working Conditions is concerned with the occurrence of stress within organisations from different state members. The European Community has published brochures and booklets where they define stress and talk about the causes of stress and some of its consequences (e.g. European Foundation for the Improvement of Living and Work Conditions, 1994 and 1997, Kompier and Levi, 1995 and 1996, Gronkvist and Lagerlof; 1997). In these official publications the Commission helps employees who feel stressed to identify stressors, stress reaction and stress related ill-health. The E.U. Framework Directive on Health and Safety states that there is a legal obligation. They help employees to determine the degree of stress at work, and to identify related health complaints at work. The

European Commission is also concerned with those occupations which are more susceptible to stress, in which they include construction workers, doctors, nurses, workers from the public transport and communication sector, and workers that have to deal with threats and violence, such as cashiers in stores, banks and post offices, and ambulance drivers, fire-fighters and police officers who deal with injured, dead, or violent people (Gronkvist and Lagerlof, 1997).

The Commission⁶ also calls attention to the importance of avoiding stress at work, arguing that stress is not only an employee problem but that it is also an organisational problem, describing the consequences of stress at an organisational level. They go further saying that it is a legal obligation for employers to identify and reduce the sources of organisational stress. They also refer to the "Law of the environment at work" in Sweden and the Netherlands that protects employees from being subjected to bad working environments, and which does not exist in other member states. Moreover, according to the Euro Review (1997), Sweden is the only E.U. member with legislation on stress. These laws provide a framework for better working conditions and also stimulates research and dissemination of the measures taken. The Swedish law establishes rights and obligations for both employers and employees, making it easier to solve any problem related to stress. The Commission also says that organisations can do a lot to reduce individual's stress, because they are the major source of stressors. Concerning prevention, the European Commission talk about organisational and individual measures to reduce stress at work. Literature and advice on "providing the employee ways for them to voice complaints", "promoting tolerance and security in the workplace"; or at an individual level, "learn how to know your reactions to stress" or "do exercise regularly", are some of the organisational and individual measures to avoid stress at work (Kompier and Levi, 1995).

The Directive on Health and Safety (89/391) makes it mandatory for organisations in all 15 member states to make available the health and safety risks to their workers. In what concerns employers' obligations, the Directive states:

⁶ European Foundation of Living and Working Conditions (1994), *Stress at Work: Does it concern you?* Office for Official Publications of the European Communities, Ireland

- “The provision of protective, preventive and emergency services;
- Comprehensive information in the area of health and safety; and
- Full consultation and participation rights to workers on matters affecting workplace health and safety”.

The Commission also⁷ states that after the implementation of the Directive on Health and Safety at a national level, all organisations are supposed to control health and safety risks in the workplace. Stress being a risk to health and safety, it is important to include stress in the control system. However employees should be informed about this control system and the reasons and objectives of this control system. The aim of this control is to identify the stressors and the individuals that are more exposed to them. Kompier and Levi' (1995) propose four lists, in the form of multiple choice questionnaires, which can be used to control stress: Control List of Job Content; Control List of Working Conditions; Control List of Employment conditions; and Control List of Work Social Relations. They also advise the use of a "Questionnaire about workplace stress", and the "Questionnaire about Health", that can be used by medium size industries.

As can be seen, the European Community is concerned about organisational stress. In publishing booklets and brochures and in advising employers and employees on the nature of stress at work, in explaining how to identify, control and prevent stress (so that organisations can easily identify the costs of stress and the benefits of prevention and management); in providing and evaluating methodologies to assess the costs and benefits; and in providing information on current practices in the area of organisational stress intervention. Moreover, the European Foundation for the Improvement of Living and Working Conditions' concern for the quality of work environments in E.U. countries is not limited to these brochures and booklets. They have not only developed a number of occupational health and safety monitoring systems, they have also created HASTE, an electronic database on the major health and

⁷ European Foundation of Living and Working Conditions (1994), *Stress at Work: Does it concern you?* Office for Official Publications of the European Communities, Ireland

safety monitoring systems, and an European network for exchange of information on this area.

The problem with this kind of regulation, such as the Directive on Health mentioned above, is that employers usually implement the minimum requirements to conform with the law. As Kompier and Levi (1996) suggest the resolution of this situation could be in encouraging "good practice", instead of just punishing the bad. This encouragement could be through tax incentives as proposed by Bailey et al (1994, cited in Kompier and Levi, 1996), or through rewards to those organisations that prepare stress audits and have stress intervention programmes.

The prevention measures presented by the European Commission to avoid stress are very positive because they want to show employers that these measures help employees to feel that employers listen to their problems, and respect and understand them. The problem is that many organisations prepare measures that are directed towards reducing the effects of stress, rather than eliminating its causes (Cooper and Cartwright, 1994). Another problem is that many of these measures seem to be focused on the employees and not on the organisation, or the organisation of the job.

1.3.2 The Portuguese Government

Although research on organisational stress has increased in the last twenty years (Kahn and Byosiére, 1990), it varies a lot from country to country (Kompier and Levi, 1995). In Portugal, it was possible to conclude that much more research is needed, particularly studies that analyse the reality of Portuguese industries. Not only people with more interest in the field, or policies able to implement the European Community rules are needed, but a stronger link between the industrial and academic communities is also needed. The Nordic countries are especially concerned with employees' health and stress, and there are major differences in the legislation concerned with workplace health in the member states, this makes some of the European members more active than others (Euro Review, 1997). Furthermore there is a tendency for this activity to

happen almost exclusively in large organisations, rather than in small and medium sized enterprises (Gronkvist and Lagerlof, 1997) which are the predominant type of organisations in many European countries. Portugal is part of this reality, especially in the textile industries (Jornal de Notícias, March 2000), which are the type of industry analysed in this study.

According to the Portuguese National Institute of Employment and Social Security, and its lists of professional diseases (1989), employees are considered to have a professional disease when he or she is affected by:

1. Intoxication due to inorganic toxins and/or organic toxins
2. Pneumatoses (due, for example, to mineral dust)
3. Skin hazards (e.g. industrial products or some chemical and biological products)
4. Diseases caused by physical agents (e.g. radiation, noise, vibrations)
5. Diseases caused by animated agents (e.g. virus, parasites)
6. Tumours
7. Allergic manifestations in the mycoses

In Portugal, as the above list shows, legislation still gives higher priority to chemical and physical hazards. The list is very restrictive, there is no reference to a large number of professional diseases, especially those related to stress, and no reference to psycho-social working conditions, such as lack of social support, monotonous work, or deficient communication policies.

In Portugal further research is required on the extent of stress and its causes, models for assessing preventive measures, and national guidelines. The northern European countries recognise stress as more of a problem than do the southern European countries where stress is usually not seen as a serious problem. The Portuguese government needs to give incentives to the dissemination of information, and to promote action among organisations and institutions. A transformation of current knowledge about stress into useful policies, laws and action is needed. It is also necessary to continue studying organisational stress, in order to improve the knowledge about those factors that cause stress at work, and the way this relationship is established and to compare different Portuguese regions and establish comparisons with other

European members. A clear definition of the costs of stress is also needed, so that economic benefits of prevention can be shown.

It seems that to a large extent researchers have to agree with Levi and Jensen (1996) when they say that to call our politicians and managers' attention to the consequences of stress it is important to show them exactly how much stress costs. At this moment the greatest amount of stress costs are supported by society, that is by 10 million Portuguese citizens. This makes the costs almost invisible; they do not seem as high as the costs of prevention programmes, which are much more measurable. Thus it is important for researchers from several countries to use real cost figures to show to these groups how expensive stress is. The Portuguese government publishes a list with the costs of work-related illness each year. However, stress is not directly addressed, and it would be important for everybody to know how much stress is costing.

In Portugal almost every day on the news people talk about the same problems, workers complain about rigid pace of work, accidents, lack of compensation, and low salaries (e.g. *Telejornal*, December 2000, *Jornal Expresso*, April, 2001, *Jornal Público*, April 2001). The labour force is getting older, fewer and fewer people have stable full-time jobs, and work life is becoming more and more intensive. People have to work harder than ever because they are afraid of losing their jobs. As has been shown above a large number of employees cannot take a break when they want, and have no power to influence the organisation or the pace of their work or their tasks.

The evidence cited indicates that the traditional Portuguese organisation continues to regard a good work environment as an extra cost, and not as an investment. Although it is known that investments in health and safety are often a benefit to the organisation in the medium and long term, a large number of managers continue to have a short-term view of this phenomenon. Moreover, the work related illnesses, deaths and accidents continue to be a heavy burden on Portuguese society. In 1994, 14.25 days were lost by each economically active citizen due to illness, and in 1995, 1326 workers started receiving money as a consequence of an incapacity caused at work (IGESS, *Estatísticas da Segurança Social*, 1996). The number of fatal accidents at work was 203 in 1990, and 232 in 1995; and the number of non-fatal accidents was always higher than 200,000 per year between 1990 and 1995, and those numbers do not include workers

from the "Caixa Geral de Aposentações" and those workers who have their own businesses, which are 10% of the working population. (INE-Estatísticas de acidentes de trabalho, 1996) After looking to some industries it is not difficult to conclude that an improvement of occupational health and safety is needed, above all in small and medium sized organisations. However some employers seem to have a different view of this situation. The government would do well to start giving incentives to those organisations that promote employee health and safety, so that others will follow successful examples.

1.4 Lack of Agreement in the Stress Field- literature review

When researchers think about the causes of stress, a fair question is: what does not cause stress? It seems that all the environments in our society have been pointed to as stress inducing in some degree. It is difficult to think about something that has not been identified as causing stress.

Studies have identified the relationship between various occupational variables and stress. Men and women who report positive job experiences also report low levels of anxiety and depression, whereas those whose experiences are negative indicate high levels of stress (e.g. Wagner and Compas, 1990). It is reasonable to ask whether these beneficial or harmful effects are due to some specific aspects of organisations and jobs, and whether there are gender differences in these effects. Researchers have already looked at a variety of potential organisational stressors: work overload, role ambiguity, role conflict, unmet expectations and interpersonal conflict among members (e.g. Kahn et al., 1964), responsibility, role pressure, physical environment, job scope (e.g. Xie, and Johns, 1995), shift work (e.g. Taylor, et al, 1997), high mental demands and complex social demands (e.g. Schaubroeck and Ganster, 1993) and high responsibility for others (French and Caplan, 1973) are some of the frequently reported stressors in organisational psychology. Another important, but less studied stressor, is the electronic monitoring of both performance and behaviour in general, suggesting that it may threaten privacy ("Big Brother is watching you") or fairness, and may contribute to occupational stress (e.g. Aiello and Kolb, 1996).

Abush and Burkhead (1984) analysed job stress in 161 mid-life working women, employed full time by a large social agency in Florida. The reported results indicated a significant relationship between women's perceived job tension and a linear combination of Type A personality and job characteristics such as variety, autonomy, feedback, significance, challenge, dealing with others, identity and friendship opportunities. Winnubst (1984) considers personality as the one cause of stress, he argues that different personality traits can lead to different interpretations of the situations. He also mentions quantitative and qualitative work overload, role conflict

aspects, the ambiguous role, the fixed (monotonous) role, the lack of social support, and the lack of adjustment between the individual and the work place. However, this article is not based on empirical research but is a literature review. French (1973, cited in Winnubst, 1984) argued that good relationships between employer and employees were very important to avoid employees' stress. He reported a positive relationship between role ambiguity and serum-cholesterol level in a group of employees who had a bad relationship with their employer and suggest that this relationship would disappear if the relationship between employer and employee were a positive one.

The European Foundation of Living and Working Conditions (1994) reported a group of work stressors. In this list they include: inadequate time to complete work to their own and others' satisfaction; lack of clear job description or chain of command; no recognition or reward for good job performance; many responsibilities, but with little authority or decision-making capacity; uncooperative or unsupportive superiors, co-workers or subordinates; job insecurity, no permanence of position; exposure to prejudice regarding the person's age, gender, race, ethnicity or religion; unpleasant or hazardous physical work conditions; no opportunity for the person to use his or her personal talents or abilities effectively; high chance for a small error or monetary lapse of attention to have serious or even disastrous consequences; and no opportunity to voice complaints. As we can see by reading this list there is only one direct reference to problems in communication. The last point of this list refers to problems in the upward communication network.

These studies are presented in Table 1 on the next page

ORGANISATIONAL STRESSORS	AUTHORS
Work overload	e.g. Kahn and Byosiere, 1990; Kanh et al. (1964)
Role conflict	
Role ambiguity	
Role expectations	
Interpersonal conflicts	
Responsibility	e.g. Xie and Johns (1995)
Role pressure	
Physical environment	
Shift work	e.g. Taylor et al. (1997)
High mental demands	e.g. Schaubroeck and Ganster (1993)
Complex social demands	
High responsibility for others	e.g. French and Caplan (1973)
Electronic monitoring	e.g. Aiello and Kolb, (1996)

Table 1- The organisational stressors that are most often cited in the literature and the authors that have studied them

In order to increase the applicability of their studies, some authors grouped stressors in to a number of categories.

Parasuraman and Alluto (1984), for example, reported three general categories of stressors: contextual, role related and personal stressors. Parker and DeCotiis (1983) identified six main causes of stress: 1) characteristics and conditions of the job itself; 2) conditions associated with the organisation structure, climate and information flow; 3) role related factors; 4) relationships at work; 5) perceived career development; 6) and external commitments and responsibilities. DiSalvo et. al. (1995) concentrated their research in what organisation members said about those organisational aspects they found to be stressful. The respondents listed 1001 causes of stress in the workplace. The perceived causes were classified into 14 categories and two broad clusters: work content and work context. The first cluster included five categories (e.g. unpleasant internal task duties; performance of others; professional risk); and the second included ten categories (e.g.: power; task communication; time; resources; and interpersonal relations).

Summers et al. (1995) constructed a model consisting of four categories of variables which have been implicated as factors which lead to job stress: personal characteristics (e.g. sex, tenure in present job), structural organisational characteristics (formalisation and centralisation in structure), procedural organisational characteristics (e.g. the amount and quality of communication, the quality of training, the quality of performance appraisal) and role characteristics (e.g. job level, role ambiguity, role conflict). The study found that procedural organisational characteristics and role characteristics appeared to be much more important than personal characteristics or structural organisational characteristics. These results indicate that organisational policies and procedures play an important role as a source of stress. Cartwright and Cooper (1997) identified eight major job stressors: factors intrinsic to the job (working conditions, shift work, long hours, new technology and work overload); role in the organisation (role ambiguity, role conflict and responsibility); relationships at work (relationship with boss, with subordinates and with colleagues); career development (job security and job performance); organisational structure and climate; and non- job stressors.

Langan-Fox and Poole (1995) identified work and individual characteristics as the sources of stress. The first group, i.e. the work stressors, could be intrinsic to the job, related to the employees' role in the organisation or to career development, relationships at work, or the particular organisational structure or climate. The individual characteristics include: level of anxiety, neuroticism and other specific individual characteristics. Humphrey (1998), reports the results of several years of studies about stress including factors encountered on the job in business and industry. He classified the stressors as follows: conditions concerned with facilities, equipment and supplies (deficiencies in the equipment, lack of repairs, poor lightning, poor room temperature, unkempt facilities); conditions concerned with time factors (e.g. time for planning, interruptions); conditions concerned with general organisational factors (e.g. record keeping practices, unreasonable deadlines); and conditions concerned with superiors (boss types).

These categories are presented in Table 2

CATEGORIES	AUTHORS
Contextual, Role related, Personal	Parasuraman and Alluto (1984)
Conditions of the job itself; Organisation structure, climate and information flow; Role related factors; Relationships at work; Perceived career development; external commitment and responsibilities.	Parker and DeCotiis (1983)
Work content, e.g.: Unpleasant tasks duties Performance of others Professional risk Work context, e.g.: Power Task communication Time Resources .	DiSalvo et al. (1995)
Personal characteristics (e.g. sex, tenure in present job), Structural organisational characteristics (formalisation and centralisation in structure), Procedural organisational characteristics (e.g. the amount and quality of communication) Role characteristics (e.g. job level, role ambiguity).	Summers et al. (1995)
Work characteristics: Intrinsic to the job, Related to employees role in the organisation Career development, Relationships at work Organisational structure or climate. Individual characteristics: Level of anxiety, Neuroticism Other individual specific characteristics.	Langan-Fox and Poole (1995)
Factors intrinsic to the job (e.g. working conditions, shift work, long hours); Role in the organisation (e.g. role ambiguity, role conflict); Relationships at work (e.g. with boss);	Cartwright e Cooper (1997)

Career development (e.g. job security); Organisational structure and climate; Non- job stressors.	
Conditions concerned with facilities, equipment and supplies (e.g. deficiencies on the equipment, lack of repairs, poor lightning); Conditions concerned with time factors (e.g. time for planning, interruptions); Conditions concerned with general organisational factors (e.g. record keeping practices, unreasonable deadlines); Conditions concerned with superiors (boss types)	Humphrey (1998)

Table 2 - Examples of categories reported by some authors as a way to improve the applicability of their studies

1.5 Final remarks

As has been discussed there is general agreement that job conditions are related to psychological distress in employees (e.g. Kahn and Byosiére, 1990, Aiello and Kolb, 1996). There is less agreement, however, about which conditions are especially harmful, with some authors considering for example shift work (e.g. Taylor et al, 1997), others considering role pressures (e.g. Xie and Johns, 1995), or unpleasant task duties (e.g. DiSalvo et al, 1995). There is also a tendency to consider both men and women as being equally affected by these different stressors (e.g. Aiello and Kolb, 1996; Langan-Fox and Poole, 1995). This work aims to bring a new perspective to occupational stress research in terms of the way organisational risk factors are characterised. It seems that researchers are more worried with microscopic problems like for example role ambiguity, role conflict, work overload (e.g. Kahn and Byosiére, 1990), or shift work (e.g. Taylor et al, 1997), or high mental demands (e.g. Schaubroeck and Ganster, 1993) than with macroscopic problems (i.e. with factors that are related to the organisational structure and culture). Communication is one of the macroscopic problems that have been under-analysed in organisational studies of stress. Instead of focusing on specific aspects like those mentioned above, which predominated stress research, this thesis intends to conduct a more macroscopic analysis. The primary goal is to analyse organisational communication which is part of organisational culture, and to see the relationship of this large variable with stress and with smaller variables that are usually seen as risk factors to occupational stress.

Furthermore, although recent years have been very productive in what concerns stress research and much progress has been made, it appears that the work that has been done at an organisational level is almost exclusively concentrated on the reduction of stress levels (Kahn and Byosiére, 1990). According to these authors this is not negative. It is very important however to concentrate on the reduction of stressors, and as a consequence the main target of interventions must be at an organisational level rather than an individual one. It is now time for organisations to realise that the problems largely originate from them and not from the individuals that work there.

However, to begin this study, it is necessary to state that some organisations strive to create a climate that allows for the creation of healthy relationships, which are supportive of the system's overall mission. This is mainly because organisations are the place where human beings fulfil social as well as professional needs. The quantity and quality of communication in the workplace is an important indicator of organisational health, and can improve workers continued identification with the organisation.

Unfortunately there is no such perfect organisation, and organisations need to first be aware of the importance and the benefits of practising a perfect communication policy. However it seems that the majority of problems and stressors at an organisational level could disappear if organisations developed an adequate communication policy. Kahn and Byosiére (1990) talk about the necessity of finding the antecedents of some of the best known causes of organisational stress. They suggest for example, that although role conflict and role ambiguity are probably the most frequently studied stressors in the organisational milieu, few researchers have studied their antecedents. It is possible to say that the antecedents of these two stressors are probably the organisational communication policies and structure.

In the following chapter, reasons for the study of communication are presented and the role of efficient organisational use of upward and downward verbal communication is discussed. The chapter will also call the reader's attention to the importance of non-verbal communication cues, especially those that are indicative of power and control.

Chapter 2

Organisational Communication

2.1 Introduction

The term "organisational communication" appeared in the late 1960's (e.g. Richetto, 1967, Voos, 1967, Guetzkow, 1965- all cited in Redding, 1985), however it is difficult to say where and when the study of communication within organisations started, and it is difficult to decide whether a specific publication belongs to this field or not. (Reddings and Tompkins, 1988)

Organisational theorists are often unclear about what they mean by organisational communication, and the majority give priority to other organisational phenomena, and only indirectly is it possible to discern what they mean and how they see organisational communication (Porter and Roberts, 1991). This chapter begins by reviewing different organisational theories. The main concern is the consequences that these theories have had on the nature of communication within organisations. The differing approaches that researchers take depend on the assumptions they make regarding the nature of the phenomenon to be studied and the nature of its reality, and the perspective they choose varies according to the nature of the study (e.g. Taylor, 1911, Mayo, 1933, Mintzberg, 1989). When organisational communication is studied it is necessary to be alert to these issues.

Communication seems to be an exciting new line of inquiry that has remained relatively unexplored when compared to other organisational phenomenon. This is an area that will in future be beneficial to occupational health in general. Although there are many contexts, cultural concerns and issues affecting different organisations, it seems that social dynamics such as communication may affect nearly every organisation. This chapter describes and explains how important it is to study organisational communication and describes several organisational communication studies (e.g. Sekhar and Anjaiah, 1995, Neher, 1997, Allen, 1992), alongside the gaps in the literature.

The communication structure within an organisation can be defined in manuals or charts, or they can be transmitted to members in a more implicit way. They provide

the means for messages to flow in all directions, so that information can reach all levels of the hierarchy, in the way decisions can be made, conflicts can be solved, tasks can be performed, so that the organisation can function well (Daniels et al., 1997). The organisational networks reflect the organisational culture and philosophy; i.e. it defines who communicates with whom, and through whom. The formal communication structure works through rules, establishing where the communication takes place, through whom the information passes and whether everybody can initiate communication and in what circumstances (Hellweg, 1997). These channels are fully described in section 5 of this chapter. Here the researcher describes the role of downward and upward communication, as well as the instruments that can be used by organisations to communicate in both directions.

Finally, and because communication is more than verbal cues, this chapter describes several non-verbal communication cues and their forms of control and power. This section gives special attention to the "Panopticon" (Bentham, 1791), and to some elements from the "Proxemics" (Hall, 1959).

2.2 The Place of Communication in Organisation Theories

Early Classical and Scientific Management Theories (e.g. Taylor, 1911) were more concerned with work efficiency and the non-human side of work. Taylor timed the workers' movements and determined the "one best way" to do the job so that productivity could be improved by creating standardised procedures. Communication was only important if it was used top-down, and if it was used as a form of control and power. It was used only to define and plan tasks as efficiently as possible (Byers, 1997). These theories developed from the attempt to apply scientific methods to management. The concepts developed by Taylor (1911) are still influential a century later, and the concepts inherent in his work dominate thinking about how to manage organisations. Work was broken into steps so that workers could do it faster and more efficiently. Separation between the physical work undertaken by workers, and the mental work carried out by managers, was the result. The notion of standardising and the separation of management from performing front-line work, continues to be the basis of many modern organisations. In this classical theory not only is there little concern for internal communication, but for external communication as well. According to Taylor, face-to-face verbal communication was important in giving directions and instructions to the workers, and communication was seen in only the downward direction, because workers were not supposed to discuss the orders given. Taylor believed that economic rewards were the basis of motivation, and that this would put an end to organisational conflicts.

The Human Relationists, started with Mayo in the 1930s, and although they do not identify important components of organisational communication, they do provide important clues for communication research in organisations. The Human Relations Movement started their investigations suggesting that physical conditions, such as fatigue, light, ventilation, and physical layout of the workplace, were very important determiners of workers' productivity. The Hawthorne studies were initiated with the objective of isolating these conditions. This model, like the scientific management models presumed that external conditions could determine human actions, i.e. people behave in certain ways because they expect something, a reward. Over several years, the different environmental conditions were isolated and tested, and no relationship with

productivity was found to be significant. What was found to have a significant relationship with production, were the relationships between workers, and between workers and supervisors. Workers were not only allowed to talk freely with each other, but they also felt more important, because they were not only seen as hands but they were participating in an important experiment. These results allowed Mayo and his team to conclude, in the 1930's, that personal relationships and communication were more important than external physical conditions. They stated that communication between superiors and subordinates should be more open and involve the sharing of points of view, and that organisational communication should be two-way and not one-way. Moreover, the Human Relations movement placed more attention on the organisational climate, which emphasises the members' attitudes and the workplace atmosphere. The human element and the workers' relationships therefore are emphasised more than the organisational structure and the formality of communication.

Systems theories, with their origins in Bertalanffy's work (1968), provided another view of organisational communication. For them what is most important is the environment where the organisation exists, this is the factor that determines everything else. These theories of organisation emphasise the importance of various organisational parts, or subsystems and their interaction with the environment. As this theory states, organisations are like living organisms, they are subject to environmental pressures, and they can live or die. Moreover the theory emphasises the importance of information and feedback, i.e. the system needs energy, (e.g. raw materials, food), and needs to be under surveillance, so that homeostasis is possible. Organisations are open systems that import and export energy from and to the environment. More importance is given to communication between the organisation and the environment and how messages are handled, and less on the content of the messages

The contingency theorists argue that organisations have to adapt to contingencies related to their environment. Depending on the models, these contingencies could be technology (Woodward, 1965), the mechanical or organic characteristics of the system (Burns and Stalker, 1961), the external technological or market demands, and internal demands of the organisation members (Lawrence and Lorch, 1967). These theories emphasise the turbulence and uncertainty of the environment and the necessity of the organisation to constantly adapt. To achieve

adaptation organisations need to be constantly informed, thus communication assumes an important role. There is no one best way to shape all organisations, but there is one best way to shape individual organisation. Once again, communication is seen in a functionalist way, i.e. communication is judged according to its capacity to achieve survival goals; communication activities are designed to achieve efficient control and direction of the system.

Political theorists see communication as one of several sources of power that can be used to influence or to win something (e.g. Mintzberg, 1989). The organisational theorists therefore offer little direct help in our search for ways to view communication in organisations. Discussions about organisational communication are relatively infrequent and there are very few attempts to try to integrate organisational theories.

As can be seen, these various organisational theories do not really analyse organisational communication. The classic school puts the emphasis on order and efficiency, and sees human members as replaceable machines. The systems approach does talk about relationships, but not human relationships, rather the relationship within the organisation of different activities and units. The contingency and political theories have a very instrumentalist way of looking at the phenomenon and do not study it in isolation. Thus, organisational communication has never been seriously addressed in any of the above schools of thought. It seems that the only organisational school of thought that gives some weight to the importance of human communication is the humanist school. However, more varied and more innovative methodologies for the study of organisational communication will be necessary for future advances in knowledge in the area of organisational theories.

Having said this, it is important to state that the primary concern of this thesis is not with organisational effectiveness; this thesis is especially concerned with the well-being of those who work in organisations. There are some differences between this idea and the view of the pioneers of the traditional perspective. This group saw organisations as machines and communication was primarily seen as a process of sending and receiving messages so that organisational effectiveness was possible. Moreover, these organisational approaches were not concerned with elements linked to non-verbal communication that express power and control.

What can be said is that the progress in the study of organisational communication results from the interest of other areas such as Psychology, Sociology, and Engineering.

While the mathematical approach from Shannon and Weaver (1911) drew attention to the transmission of the message, the psychological perspective emphasised the cognitive structures of those involved in the communication process. This process depends on the participants' values, beliefs, opinions, needs and mental constructs (e.g. Klapper, 1963, Hovland and Weiss, 19451, Lund, 1952). The focus is thus on the individual and not on the process or the channels. The sociological perspective sees communication as the result of the interaction of several individuals. This perspective emphasises the group, the society. As Mead (1943) argued, the individual's concept of self is only possible as a consequence of ongoing interactions with other people. The importance of roles, especially the ability to take or play different roles is very important to the act of communication. The sociological perspective draws attention to other elements that result from this interaction process. The Bateson (1936) analysis of social interaction and the concept of "double bind" highlights the idea that communication is not always simple and there are a group of factors influencing individuals' relationships and consequently communication. The "proxemics" from Hall (1959), and the idea that space communicates and influences the way individuals communicate; Goffman's (1967) study of "face-to-face" interaction, where the author refers to elements such as the "face-work" and the nature of "deference" and "embarrassment"; "The impossibility of not communicating" from Watzlawick (1972), where the author calls the attention to non-verbal cues; and the non-verbal communication implicit in the studies developed by Foucault (1975), are all examples that show that communication is much more than the simple reception of a message.

Thus, it is possible to conclude that organisational communication cannot be seen solely as the result of what is said or written and transmitted downwards or upwards, it is also the result of implicit forms of control and power that express the meanings, values and beliefs of those who own the organisation and those who work there. Thus to understand organisational communication one needs to consider not only verbal communication but also non-verbal and subjective communication.

2.3 The Importance of Organisational Communication

The study of organisational communication can help us to understand organisations and the experiences of their members, and the series of human processes that occurs inside the organisation, such as conflict, power, decision-making, commitment, interpersonal trust, human performance (e.g. Allen, 1992, Chandra and Anjaiah; 1995, Pincus, 1986, Sekhar and Anjaiah, 1995).

Organisations have to meet contemporary demands, and to do that they have to develop adequate communication policies so that employees feel they work in an organisation that cares about their problems, their well-being, their opinions and ideas (Lampreia, 1992, Lawler, 1986). As was previously discussed in the beginning of this chapter, the traditional organisation viewed employees as wanting only extrinsic rewards for their work. Workers were seen as "economicus" beings, having only economic motivation. The development of the Human Relations school showed to a certain extent that workers were much more than this. Employees were then seen as social beings with different kinds of motivations. Healthy organisations were those that respected a set of work values, that allowed employees at all levels to experience care, participation and freedom to communicate.

Lawler (1986) reported that higher levels of employee participation and involvement makes employees more satisfied. Strayer (1990) showed that the traditional Theory X assumptions that organisations need levels, that people at the top must make policy decisions, that democracy cannot work in organisations, and that people do not want to work, cannot be supported. Levering (1988) developed a model based on the development of trust in the work place, including participation and shared rewards.

Communication within an organisation not only affects employees' trust and participation in the organisation (Levering, 1988) but also influences the way they behave and the way they work and view the organisation (Porter and Roberts, 1991). It also makes business possible. Without this process there is no management, no sales, no demand or supply, and no marketing (Wiio, 1988). Communication within organisations

allows the achievement of production, through the co-ordination and control of activities that allow the process of verbal interaction regarding amounts of output or job procedures. It also allows the maintenance of the organisation through information that regulates the systems processes, defining rules and policies that allow the organisation to correct negative feedback (Daniels et al 1997). As a consequence of a communication problem, Neher (1997) gives the example of the space shuttle "Challenger" that exploded 53 seconds after lift-off. It seems that the reason for this explosion was a failure in the communication process. This process was based on a chain of communication with four levels of decision. The engineers from Morton Thiokol were at the bottom of this NASA chain. They had tried to show that the O-rings, designed to confine the blast of the rocket engines, could not work properly at the low temperatures of that January 1986. They had communicated this concern to level three (the Marshall Space Flight Centre and Kennedy Space Centre), but this had not been passed to level 2 (the pre-flight readiness review group), nor to level 1, the final decision level.

Communication also allows innovation through the use of information that permits change. It involves the application of new ideas and processes and also involves the implementation of necessary strategies that allow members to accept these changes. This can involve different levels such as the structure, the policies or the culture (Lampreia, 1992).

Even the definitions of "organisation" have relevance to communication. Definitions include the idea that individuals and groups compose organisations - *"Organisations are composed by groups of two or more individuals ..."* (Bilhim, 1996, p.22) or *"An organisation is composed of people who all share a sense of belonging to it in some way"* (Statt, 1994, p.26). Since organisations are composed not only of individuals but also of groups meaning that communication assumes a very important place in organisations. Another important aspect is that definitions say that organisations have a goal- *"An organisation is the planned co-ordination of the activities by a number of people for the achievement of some common explicit purpose or goal (...)"* (Schein, 1988, p. 15) or *"Organisations are social arrangements for the controlled performance of collective goals"* (Buchaman and Huczynski, 1985, p.5). The fact that organisations are goal-oriented implies communication and also determines communication. It implies communication because all the members need to be informed

about organisational goals so that they can act and work in conformity with these goals. On the other hand it determines communication because the organisation goals will determine the content of messages and information transmitted to organisational members.

The notion of organisation also includes the idea of division of labour- "*Organisations are characterised by the division of labour, power and responsibilities ...*" (Etzioni, 1964, p.3) or "*Organisations are the result of the rational co-ordination of the human and material resources, as well as the differentiation of roles and hierarchical positions ...*" (Ferreira et al, 1996, p.260). The division of function can enhance or reduce social interactions, depending where and what the individual function inside the organisation is. Individuals that work in the same office and have similar functions easily interact and communicate when compared with individuals that work in different spaces inside the organisation and perform different tasks. Another organisation characteristic is continuity in time- "*organisations have more or less stable structures*" (Gross, 1968, p.52, cited in Porter et al. 1975) or "*A social group deliberately created and maintained for the purpose of achieving specific objectives*" (Kempner, 1987, p.361). This influences the type of communication between people, because they know that their actions will be perpetuated and will influence their present and future relations. Employers know (or, in principle, should know) this, and they have to be very careful what they say and the way communication is established between them and other organisational groups. The organisational image very often varies and is a result of this communication policy.

However, to what extent are modern organisations conscious of the importance of organisational communication? What constitute a non-stressed organisation? Is communication the best variable to explain occupational stress? Does the identification of communication as a variable of organisational stress highlight promising lines of empirical research and lead to new models? Before answering these questions, this chapter proceeds with a review of communication research, its importance, and the way it has been identified with job satisfaction but not with occupational stress. One explanation why organisational researchers are giving this potential stressor less importance may be because nobody has identified this variable as having an important effect on organisational stress. The concern of this thesis is that communication can be

an important variable which has been systematically omitted from consideration and that, when researchers leave it out, their efforts may lead to a loss of effectiveness and relevance.

2.4 Verbal Communication' s Studies and Gaps

Clearly communication is a crucial means by which things get done in organisations. So much communication goes on in organisations that researchers have found it useful to examine the flow of communication in terms of the various directions it takes. Thus, the characteristics of communication within an organisation can in a simplistic way be described as being of three types: upward, downward and horizontal, describing the organisation's formal authority and hierarchy (e.g. Neher, 1997, Daniels et al., 1997). (This will be discussed further in the next section of this chapter)

Organisational studies, in terms of communication, have focused their attention in a variety of directions. Some authors have analysed the relationship between organisational communication and interpersonal trust (e.g. Sekhar and Anjaiah, 1995, Gaines, 1980). Madhu, et. al, 1990) found that organisational communication, its dynamism, expressiveness and impressiveness, was negatively correlated with role conflict and role ambiguity in petroleum organisations. According to this study communication could explain 9% of the variance in role conflict and 14% in role ambiguity. Furthermore, Watkins (1992) reported that employee perceptions regarding top management-employee communications relationship and the quality of these communications, were strongly correlated with organisational commitment. Nayyar, (1994) reported that communication was positively and significantly correlated with job performance in the public sector organisations studied by him. Communication openness has also been positively related with positive organisational climate, i.e. with employees' greater job satisfaction (e.g. Jablin 1978). Allen (1992) analysed the relationship between organisational communication and employees' commitment, i.e. if employees perceive they are valued and cared for they will easily support the organisation in which they work. They studied the effect of six communication variables in commitment. The six communication variables were: the employees' perceptions regarding the quality of the information received from three communication sources (top management, co-workers and immediate superior), and the quality of their communication relationship with each source. DiCotis and Summers (1987, cited in Allen, 1992) reported that top management communication can influence employees'

commitment, sense of organisational membership and identifications, and perceptions of an organisational climate or culture. Allen (1992) also refers to a Tziner and Latham (1989) study, where superior-subordinate communication was also found to influence organisational commitment through task related feed-back and goal setting, and Eblen (1987) where superior-subordinate communication was found to influence organisational commitment by social cues sent regarding an organisation's climate.

During the past 30 years, job satisfaction has been one of the topics most studied by organisational researchers. It is usually identified as the employees' positive perceptual reaction to work facets, such as supervisors, pay and promotion (Pincus, 1986). Information about the relationship between organisational communication and job satisfaction came initially from laboratory experiments with small groups. These groups had to perform experimental tasks of controlled difficulty within the communication network manipulated by the experimenter. Shaw (1981), for example, reported that the 'pinwheel' network was associated with greater job satisfaction than the 'wheel' or the 'chain' networks. This indicated that, at least in small groups, a relationship between communication networks and job satisfaction was found. Other researchers have also found positive relationships between superior-subordinate communication and job satisfaction (e.g. Schweiger and Denisi, 1991), whether measured as a direct influence on job satisfaction (e.g. Schweiger and Denisi, 1991), or measured as an indirect influence operating through organisational processes such as performance appraisals (e.g. Nathan et al, 1991). Sharma and Sharma (1989) found that communication was positively and significantly related with overall job satisfaction in the case of both officers and clerks.

An older study found that communication behaviours alone accounted for more than 60 per cent of the variance in employee job satisfaction (Goldhaber et al, 1978). In another study, Hatfield and Huseman (1982) asked 1200 employees questions about their superior-subordinate communication and their satisfaction with work. They found that subordinates' communication was positively related to the extent to which subordinates felt job satisfaction. Furthermore, Pincus (1986) administered a modified version of the Communication Satisfaction Questionnaire and the Job Descriptive Index to 327 hospital nurses. Data analysis revealed a significant positive relationship between

communication satisfaction and job satisfaction. Superior-subordinate communication relationship was confirmed as being important in job satisfaction.

More recently, Callan (1993) investigated managers' and subordinates' communication with each other in terms of frequency and initiation (quantity), levels of recognition and self-disclosure (quality) and levels of dominance by managers. He found that subordinates with higher job satisfaction reported more communication and a higher quality of communication with their managers. Muchinsky (1977) developed a study where the purpose was to examine the relationship between measures of organisational communication, organisational climate, and job satisfaction. He used a sample composed of 695 employees of a large public utility. Respondents included various levels of management, telephone operators, telephone service repairmen, crafts and technical personnel. He found a correlation between organisational communication and the other two variables.

However, Gregson (1991) surveyed 310 certificated public accountants using the Job Descriptive Index and the Communication Satisfaction Questionnaire. Communication satisfaction and job satisfaction tended to group separately. They concluded that certificated public accountants viewed communication satisfaction and job satisfaction as separate constructs. However the different results in these studies may result from the fact that they used different group samples. It may also be that certificated public accountants are a more independent group than the other groups from other studies, whose well-being and job satisfaction results from other factors.

Although some of these studies reveal that organisational members spend a large percentage of their time communicating (e.g. Kelly, 1964; Brenner and Sigband, 1973), they also indicate that the time spent in this kind of communication is dedicated to task issues and to more impersonal than personal topics (e.g. Baird, 1974, cited in Jablin, 1978; Richeto, 1969, cited in Jablin, 1978). These findings are of significance, especially when communication patterns have been associated with job satisfaction.

Despite some differences in the methodology and the communication variables that have been analysed, these studies show that the more trusting, open and participative the communication between superiors and subordinates is, the more

satisfied the employee is with his superior and the organisation. In these studies there is evidence of a strong relationship between organisational communication and job satisfaction, particularly regarding superior-subordinate communication. Through these studies it is possible to observe that there is an increasing use of measures to study organisational communication and job satisfaction. However, until now there has been no study that has integrated multidimensional measures to analyse the relationship between organisational communication and stress.

The diversity of the investigation and the lack of coherent organisation and classification, makes the analysis of organisational communication a large field in which the researcher can easily get lost. In fact the empirical literature on superior-subordinate communication can be classified into several categories. Jablin (1978) identifies nine topical categories: interaction patterns and related attitudes; openness in communication; upward distortion; upward influence; semantic influence distance; effective vs. ineffective superiors; personal characteristics; feedback; and systemic variables. In 1978, Katz and Kahn reported that the more common types of communication exchanged in superior-subordinate interactions could be classified in two ways. Firstly, downward communication, i.e. those from superior to subordinates are of five basic types: job interactions; job rational procedures and practices; feedback about subordinates performance; and indoctrination of goals. On the other hand, upward communication, i.e. from subordinates to superiors can take four basic forms: information about the subordinate himself; information about their co-workers and their problems; information about organisational practices and policies; and information about what is to be done and can be done. Again, Georgopolus and Mann (1962) have classified communication according to several different aspects: adequacy, amount, quality, frequency, informality and direction. Furthermore, most of the organisational research refers to communication from the global perspective only and does not distinguish the varying facets of communication (Prince, 1972, cited in Chandra and Anjaiah, 1995).

The following table summarises some of the studies that have been mentioned above

COMMUNICATION VARIABLE	ORGANISATIONAL VARIABLE	AUTHOR
Communication in a global form	Job satisfaction in a group of officers and clerks	Sharma and Sharma (1989)
Communication dynamism, expressiveness and impressiveness	Role conflict and ambiguity in petroleum organisations	Madhu et al. (1990)
Employees perception regarding top management-employee communication relationships and the quality of these communications	Organisational commitment	Watkins (1992)
Communication in a global form	Performance in the public sector organisations	Nayyar (1994)
Communication openness	Organisational climate; employees job satisfaction	Jablin (1978)
Communication employees- superior elements of the hierarchy	Job satisfaction	Hatfield and Huseman (1982)
Open and participative communication	Job satisfaction	Pincus (1986)
Communication between superiors and subordinates in what concerns frequency (quantity) and the methods used (quality)	Job satisfaction	Callan (1993)

Table 3 The organisational variables that have most often have been associated with organisational communication

No theory directly attempts to explain the relationship between organisational communication and stress. Neither theorists writing about communication nor theorists writing about stress have provided sets of interrelated propositions detecting the relationship between both variables. In this sense communication lingers behind other organisational areas that have received much more attention. The majority of research carried out on communication seems not to have penetrated to the heart of organisational communication problems and its consequences.

With this variety of classifications and analysis in mind this research not only attempts to alleviate this confusion by reviewing and providing directions in the area of organisational communication, especially in the area of superior-subordinate communication, but it will also analyse the mechanisms used by those who are responsible for the communication processes within the organisation. This is done so as to analyse which opportunities superiors give to subordinates so that they can communicate to those above them; to analyse the quality and quantity of verbal and non-verbal communication mechanisms used; and to analyse how the quality and quantity of these communication mechanisms are related to subordinates' levels of occupational stress, in both men and women. It is important to know what kind of messages are more likely to go through the various formal channels in the communication network, and to know if people are encouraged to send other types of messages as well. Are the downwards channels used more to inform or to persuade? Do employees feel free to communicate upward?

As has been shown, previous studies have already established the relationship between superior-subordinate communication and job satisfaction. However these studies did not establish the relationship between verbal and non-verbal communication and stress, for both men and women. Furthermore, several researchers have focused their attention on potential sources of organisational stress. These sources of organisational stress have often been identified as workload, role conflict, role ambiguity and environmental conditions. However it seems that no attention has been given to the importance that communication networks can have in the aetiology of stress. It may well be that factors such as work overload, role ambiguity and role conflict would never happen if the communication processes were working well within

the organisation. It may well be that these factors, so well researched, are a kind of intervening variable on organisational communication's relationship to occupational stress. In addition, and based on this literature review, it seems that few, if any researchers have looked at communication as being a potential cause of organisational stress. Although some authors did include upward or downward communication as part of their major variables, they did not pay much attention to communication itself.

2.5 The Communication Net

Formal communication refers to communication that happens through the official channels of message flow. The messages that flow inside the organisation can occur both horizontally and vertically. Horizontal communication involves employees with relatively the same status, but this is not true of vertical communication. This kind of communication involves employees with different status and can also involve those in the higher level of the hierarchy, the employers (Neher, 1997). Vertical communication is designated downward communication when it is initiated by the individuals at the higher levels, and upward communication when it is initiated by individuals at the lower levels of the hierarchy (Hellweg, 1997).

2.5.1 Downward Communication

2.5.1.1 Role

The first type of vertical communication cited above, i.e. the downward communication, serves to educate, instruct, advise and help employees understand what their benefits cover, what their rights are, give instructions and training, give information about company policies, trends and plans, provide a rationale for directions and policies; and evaluate work performance (Neher, 1997).

It allows for the satisfaction of employees' 'need of information' about their performance and about the nature of their relations with their superiors, so that they know how to behave inside the organisation. If there is no feedback, positive or negative, the employees will not know where they stand. They also need to know when the feedback occurs, so that they know when to expect this and are not anxious because it can happen at any time (e.g. Porter and Roberts, 1991, Hellweg, 1997). In their model of interpersonal communication Wesley and McClean (1957) talk about the importance

of feedback when researchers think about organisational communication, particularly because of the frequent use of rewards and punishment in organisational settings. It is argued that employees can easily change their behaviour and the content of their communications if they perceive any reward or punishment. Another important aspect, according to this model, is the quality of feedback, because sometimes it is so vague that employees misunderstand it and think that their superior only sees the missing details and that employers are not noticing what they do.

Downward communication assumes a very important role, not only to established members but also to new ones. It is important that new members have a positive view of the organisation, even before they start working there. New members have to be shown videos, presentations, training lectures and speeches so that the process of organisational socialisation can start. They have to be introduced to the organisational way of doing things, i.e. to the organisational culture, so that they know how to behave, and what is expected from them (e.g. Canfield, 1991). The use of this type of communication is very important to give orientation to new employees, giving information about their position and role, the company philosophy, the organisation structure, company procedures and policies. This allows the construction of the organisation image, allowing the employee to reinforce its beliefs and practices (e.g. Lampreia, 1992). Members can also be informed about safety procedures, helping to reduce the number of accidents, and reducing complaints. Having well-informed employees helps to avoid damage caused by rumours. Rumours represent incomplete information, and employees may try to guess the missing parts (Hellweg, 1997). Employers must realise that rumours happen when employees do not have enough information. Employers have to provide this information as soon as possible so that employees feel that employers are responsible and care about employee needs. Some studies show that distrust influences information processing and distortion in organisations. In industrial organisations where the communicator distrusts a recipient, the information s/he sends that person is distorted (e.g. Chandra. and Anjaiah, 1995, Sekhar and Anjaiah, 1995).

With the development of a positive internal downward communication policy it is possible to have highly motivated and low stressed employees, building a positive internal organisational image that will be transferred to the external public.

2.5.1.2 Inappropriate use

Downward communication was, and in some places still is, used as a form of control and transmission of information concerned only with production and maintenance. Organisation theorists, as previously discussed in this chapter, first thought that employees would comply and be motivated only with this kind of information. However, theorists soon noted that this was not the case. The Hawthorne studies (Mayo, 1933) were the first to show that this was not a simple problem. However, their concern was only to have satisfied employees so that they would easily accept the employers' authority. Only recently have theorists started to argue that downward communication should also satisfy the employees' need to know for their own purposes, and that this was very important for successful employee integration in the organisation.

Moreover, employees seem to receive more information about job duties, although they would prefer to receive more information about other topics. According to Neher's (1997) study, employees need to have information about their pay and benefits; about how they are being judged; organisational policies; job duties; promotions; how technological changes affect their job; mistakes and failures of the organisation. Neher also refers to the fact that there is frequently a discrepancy between the information that employees receive and the information they would like to receive. Moreover, Goldhaber et al. (no ref. to the date, cited in Daniels and Spiker, 1983) reported that organisational members prefer to receive information that is related to their immediate work environment than information related to the organisation as a whole. However, he also reported a correlation between information adequacy and job satisfaction. Job satisfaction was highest when the information involved organisation-wide matters.

2.5.1.3 Methods/ Channels

The methods that can be used in the process of downward communication to disseminate the messages to the entire structure of employees are for example: internal magazines, general memos, employee meetings, newsletters, handbooks, instruction manuals, job descriptions, work rules, memoranda, pay inserts, letters to members' homes, print advertising, bulletin boards, information handouts, annual reports; closed circuit television, videotapes and films, telephone "hot lines", computer bulletin board messages, e-mail, fax messages, voice mail, videoconferences, advertising as on radio and television, bulletin boards, internal journals, computer mediated systems, interviews, face-to-face meetings (such as: employment interviews, performance evaluation, disciplinary interviews, on-the-job training, conferences, chain of command, monitoring; orientation and training groups, department meetings, committee meetings, quality circles, mass meetings, speeches). The meetings can also include rallies, Christmas parties, celebrations, and awards (e.g. Lampreia, 1992, Meulemeester, 1991).

According to Neher (1997) the higher levels tend to rely heavily on printed and mediated channels for downward communication, and this is probably one of the main reasons for employee dissatisfaction. A study by McCathrin (1987, cited in Neher, 1997), of 32,000 employees in 26 organisations showed the importance of personal, direct communication, especially with immediate supervisors. However if the organisation has a vertical structure, passing the message face-to-face through various levels until the desired level is reached, can lead to distortions. While some of the written and audio-visual formats are one-way formats, face-to-face communication, and e-mail, the voice-mail and the telephones allow two-way interactions. However, the new communication devices, such as voice-mail, e-mail, or pagers can reduce the line between organisational time and private time, and this can also be the cause of stress. Now, more than ever, it is easier to contact an employee, wherever s/he is, and ask her/him to come immediately to the organisation because there is extra work for her/him to do.

2.5.2 Upward Communication

2.5.2.1 Role

Upward communication involves, as has been said before, the flow of information from the lower levels to the upper levels, i.e. from the subordinates to the superiors. Upward communication can provide management with some form of feedback about their policies, and it can give employees a voice for their concerns, opinions, or complaints. Today it is recognised that this channel is far more important, and that it should be used as a way to improve morale, to improve interpersonal relationships and decision-making, and to give voice to employees, so that they can express their feelings, give their opinions, establishing a two-way bridge between employees and employers (e.g. Hellweg, 1997, Daniels et al. 1997, Lampreia, 1992).

Furthermore, employees' opportunities to communicate freely with superiors and to have a voice can be seen as important in avoiding stress, especially if they can criticise. Employees who voice dissatisfaction will be more loyal and will feel less frustration when they find unsatisfactory conditions. (Gorden and Infante, 1991) Employees, it is argued, should not suffer retaliations because they express critical or negative opinions about those in authority. In organisations the dominant idea cannot be that management and employers are the ones that possess the monopoly on truth, because this represents a paternalistic, despotic system that intimidates and forces obedience.

Participation can be seen as a process of delegation and empowerment, where employees gain freedom to give their opinions, to take part in the process of decision making, to have a voice in meetings (Marshall and Stohl, 1993). It enhances employee satisfaction and performance, and allows for feelings of affiliation and independence leading to a higher level of employee satisfaction (Castrogiovanni and Macy, 1990, Monge and Miller, 1995). The problem sometimes is that employers, managers and employees do not have the same idea about what participation is and at what level they

participated at. Gorden and Infante (1991) reported that, in a study of 253 employees from several organisations, those employees wanted more freedom of speech in the workplace than they had. They showed that the lower the perceived freedom of speech the lower the employee commitment to and satisfaction with their work and supervisor and employee perception of the organisation is less favourable. They argue, that for commitment to be possible, organisational communication must allow participatory involvement and critical voice. The first involves subordinate-superior collaboration, information sharing, problem solving and decision making. Commitment can be explained as a process through which members identify with organisation's goals and values, allowing members to identify themselves with the organisation (Allen, 1992). This process is important because the higher the commitment, the greater the performance and the job satisfaction (Monge and Miller, 1995, Gorden and Infante, 1991), and therefore stress levels will be lower.

2.5.2.2 Inappropriate use

This channel was primarily used, and in some cases is still used as a channel to obtain information about reports on task related matters (Daniels et al., 1997). In classical theories, as previously discussed, upward communication was seen as positive as long as it allowed management to control and monitor employees. Subsequent studies began to see upward communication in a different light in that it was important in commitment and employee problems (e.g. the Human Relations movement).

Although theorists agree that this is a very important organisation communication channel, it is not always valued by employers. According to Daniels et al (1997) some organisations do not encourage this kind of communication, or if they have the means to encourage it (such as reporting methods, employees meetings, suggestion systems, or attitude surveys) they just work theoretically. Sometimes the reports are never read, the surveys are never analysed and the suggestion boxes never opened. Take, for example the recycling system in Portugal. Seven or eight years ago people took the trouble to separate rubbish and put it in the right recycling bins. It was then collected and disposed of at the same tip. Furthermore, the majority of managers

seem to be far more receptive to positive than negative information, or employees do not feel enough freedom to say what they real think about something, and they say what they think employers want to hear. The existence of trust between employers and employees is an important ingredient if the first group wants accuracy in the information sent, and if they want employees to be motivated and not stressed every time they want to send information upwards.

2.5.2.3 Methods/ Channels

The channels that are frequently used for upward communication can be printed channels like the suggestion box; the opinion surveys, the memoranda, written reports, face-to-face meetings such as appraisal and grievance interviews, conferences, department meetings; quality circles: training groups; question-and-answer sessions; training sessions, and also telephone hot lines, video and teleconferences, e-mail computer messages (e.g. Neher, 1997, Canfield, 1991).

2.6 Non-verbal Communication

The findings of section 2.4 came from traditional communication research, which is concentrated to a considerable degree on particular aspects of the communication process, such as the channel or the direction of communication. It is also important to look to other communication elements, especially those concerned with non-verbal communication and the implicit forms of control and power.

Non-verbal communication is much more than body movements. In reality, non-verbal communication is much more complex than the majority of articles or books portray it. This section intends to introduce the literature about the nature of non-verbal communication in the organisational setting, with the hope that this will increase reader's understanding and sensitivity of the non-verbal system.

2.6.1 The "Panopticon"

In 1791, Jeremy Bentham's ideas in "The Panopticon" (1791, republished in 1977) rapidly spread around the world and continue to influence modern organisations. The term "Panopticism" is now common among social theorists, and much valuable work has been inspired by Foucault's resurrection of Bentham's prison design. Bentham developed an architectural model of modern prisons, which could be applied to hospitals, schools, industries and even modern towns. The Panopticon intends to normalise prisoner behaviour. The prisoner is considered rehabilitated when he/she leaves prison with the conviction that if s/he displays abnormal behaviour s/he will be punished. The Panopticon first confines the person to a strictly confined space, so that there is no doubt of whom is behaving abnormally. The power exercised in the panopticon is politically convenient to those in the higher levels of the hierarchies of the prison because they do not have to expose themselves to criticisms and resentments and

the system works efficiently. Moreover, if the system is really efficient they do not even need to use punishment, if the panopticon is really powerful there will be a low amount of deviant behaviour.

Organisations based on this model give one man the power to watch over a large number of people. In a Panoptic organisation everybody has to work all the time because they never know when they are being watched or controlled. Foucault (1977) referred to the supervision of activities in organisations. In a modern organisation everyone, but especially those in the lower levels of the hierarchy, is subject to surveillance. This can be seen, according to Foucault, in several types of organisation: in schools students' desks are arranged in a row; in industries workers often have to work in assembly -lines.

Furthermore, recent advances in office automation are causing changes in the way employees are supervised in the work place. The development of new technologies has allowed organisations to practice surveillance of their workers. Cameras have been placed to monitor everywhere, making employees feel that the organisation does not trust them, and as a consequence they do not trust the organisation. According to a "Newsweek" article (July 1995) industries that provide closed-circuit cameras and television are booming, with an estimated value of \$2.1 billion for that year, and it was projected that by the 2000 this business would increase by 62 per cent.

The use of security video cameras allows employers to obtain information about their employees without personal contact and communication. This allows managers to have moment-to-moment information about their employees' performance, and sometimes employees do not even know that their work is being observed. This practice is probably associated with communication problems within the organisation. Employees may feel they lose their privacy and feel less powerful and be afraid to communicate upwards. On the other hand, those in the higher levels of the hierarchy may feel they do not need to use verbal communication to obtain information from below. As Bentham said the "Panopticon" is the ability to see everything without being seen, conferring power and supremacy.

Although the body of citizens is not fixed in space, more than ever, individuals suffer from the constant threat of observation. Their daily activities are, as in the Panopticon, often subject to regular observation and surveillance. When individuals leave their homes in the morning there is a possibility of a speed trap because he or she is driving 10 or 20 km faster than is allowed. When they arrive to their offices they know that they have to behave properly because there is a camera or someone supervising their work. Before going home, if they go to the supermarket they are afraid that if they stop too long in front of the same shelf "they" will think he or she is stealing. When they go into the "privacy" of their homes they have to close the curtains and not speak too loud because neighbours can see or hear what they are doing or saying. It seems that individuals are losing private spaces, and that no longer is there a difference between public and private. "They" want individuals to believe that all this control throughout an individual's life, starting from when they are born and registered, is intended to promote stability and order. However, it seems that the various means of monitoring, that were once just a means to achieve control, have no end, and will create a stressed society where individuals no longer have a sense of identity.

Modern organisations are dominant political and social places. Even in democratic countries, organisations may not operate along democratic principles. In recognising this fact, it is important to focus on how decisional control happens in the workplace and how this process affects employees. It seems that today, control in the workplace is multi-faceted, and that there several forms of coercion. This system tends to create disciplined individuals who exert self-control and surveillance. According to Salaman (1979) organisations can control their employees through explicit and implicit control. Explicit control can be observed through the centralisation of decision-making. Organisations design jobs and define rules and principles, i.e. they increase formalisation that in turn reinforces the centralisation of decision-making, and they directly evaluate employees' work.

Organisations have structures of control, the question is how this control is exercised and who holds the power. Traditionally, theorists studied the power of individuals in an organisation through the observation of confrontation over important issues. Researchers would observe the conflict, observe the various members' positions and the outcomes of the conflict (Kirkbride, 1992). Resulting from this observation a

profile that shows the amount of power possessed by each member was drawn up. The problem with this kind of research is in determining the importance of the topics, knowing if the important parties in the conflict are not acting in a way that affects the observations. Also, important issues may not be discussed in the presence of an external observer (Conrad, 1983). Power, however, is not only exercised in this kind of confrontation, but power is often exercised covertly. Managers may reinforce norms and practices that ensure certain behaviours. During the 20th century organisational control has become less personal and direct, control is rarely the result of subjugation directly imposed on the employees from visible bosses.

In organisations, power can work through the organisation of bodies in spatial arrangements in order to achieve maximum obedience. This is achieved in organisations through a variety of ways: through the restriction of movements, such as on assembly lines; through the association of individuals in a single space, like offices; through surveillance, for example the use of cameras; or through the control of employees' activities such as timetables, rules, production control (Giddens, 1990, Kirkbride, 1992). This system allows management to control employees deliberately, but through neutral mechanisms. Moreover, organisation hierarchies can be seen as an instrument of control in both actual and symbolic ways. They allow for the isolating of employees in controllable units and also label them. The rules and procedures that exist in modern organisations are not just a way of organising and establishing order; they are often an important means of control; they not only provide protection and rights to employees, they are often a way of legitimising the managerial control (Kirkbride, 1992).

Employees who work on the production line can be controlled through a variety of methods. Salaman (1979) pinpointed three different forms. First, control through location within an automated production system that is designed to achieve the highest level of production in the minimum time possible. Secondly, managers measure these employees performance through a variety of methods. They can directly measure their production, or they can give employees rewards for good performance, which is a way of indirectly measuring their performance. Thirdly, the organisational rules are often used to justify or oppose employees' practices and behaviour. These employees have their tasks tightly and minutely defined; there is little space for alterations and creativity. Moreover there is a considerable emphasis placed on the constant measure of

work output, and assembly-line employees spend their time working with machines that already control the quantity and quality of work. Not only do machines act as work supervisors, but the process of work interdependence, that can be seen in the assembly line, also works as a form of control.

Edwards (1982, cited in Daniels et al, 1997) identifies three strategies of organisational control - simple, technological and bureaucratic. The first is the result of the supervisors' personal control over employees' performance. Technological control is the result of the type of technology used in the organisation. Third is the bureaucratic hierarchy and relationships, based on legal rules that punish those that do not follow them and give rewards to those who do.

2.6.2 The proxemics

There is a tendency to see language as the primary, or even the unique, form of communication. Other more commonly explored non-verbal codes are kinesics (popularly called "body language"), vocalics (i.e. the use of voice) and haptics (i.e. eye behaviour, facial expression and touch) (Manusov and Billigsley, 1997). This thesis will analyse an area of research that is not so well explored in non-verbal communication, proxemics, i.e. the use of space. Proxemics refers not only to the way individuals use a specific territory, but also how far or close they are likely to stand to others (Manusov and Billigsley, 1997). The use of space to convey meaning is an area of non-verbal communication that has not received much attention. With chairs, windows, desks, corridors serving as non-human components of the organisational environment, attention should be directed to how people in organisations use space and furniture as communication devices.

Hall (1959) talked about how space can influence interactions between people. He uses the term "proxemics" to refer to the group of observations and theories that are related to people's use of space, as a specific cultural product. A lot of progress is yet to be made concerning space organisation, especially in interior spaces. Space is an

organism's continuity. The conception of space has changed over time (Shields, 1997). The differences between space design and the activities that are supposed to be developed there are often surprising. All human beings "feel" space; and can feel it quite differently, according to their experiences and mental health.

Employers and employees sometimes mark out their territories and establish allowed distances between them. The use of space is a powerful social and organisational factor that can differ from culture to culture. Humans are territorial creatures who defend and use their space in a personal way. Individuals arrange objects in space according to their objectives, and to define interpersonal distances. Hall (1959) identified three basic types of space: fixed-feature space involves imaginary or concrete, but stable boundaries that define territory (the relationship between status and space). Goldhaber (1993) reported that the higher the individual in the hierarchy, the bigger and better the space he or she inhabits, the better protected his or her territory is and the easier he or she can invade the territory of the lower status personnel. Semifixed-feature space is related to the way individuals position objects in space. The arrangement of desks, equipment, chairs for example gives us an idea of the policies practised in that particular organisation and of the personalities of those who work there. The final category is what Hall called informal space and refers to the proximity of one person to another in interpersonal settings. According to varying distances, he identified four zones; the intimate, the personal, the social and the public.

The structure of the environment is also a non-verbal cue that tells us a lot about the organisational communication culture. In a work environment, the furniture arrangements, the architecture of the place, the number and usefulness of the corridors, the existence of doors and walls in the objective and subjective sense, all tell something about the way communication works in that organisation (e.g. Byers, 1996, Alman and Chemers, 1988). Evidence tells us that in some organisations open settings are provided, where groups or people work collectively. In other organisations people have to work in small rooms alone. Because of the repetitive nature of some kinds of industrial work regular supervision is needed to ensure that the pace of labour is sustained. In organisations space often defines deep differences between what happens on the assembly lines and in the offices for example. The environment has the potential to go far beyond its basic function, it tells the organisational members what they can and

cannot do, and it is sometimes more imperative than verbal communication. Non-verbal cues usually work together with verbal ones, and they have an important role in determining behaviours.

The idea of space has often been assumed as being something neutral, with no political meaning or social power, as something that does not create benefits for a specific group. Geographers were initially the ones to study space, it was something that could be measured in metres, providing economic power to its owners. According to this view space exists as a material, objective thing, excluding important cultural and cognitive issues from the analysis. It is no longer possible to speak about space without including these factors. The way space is perceived has dramatically changed, space is no longer singly attached to its geographical meaning. Human lives are understood spatially, as are towns or sites in the landscape. Moreover if social space is to be understood, the concept of space has to be extended to encompass more than the objective notion of objects in space (Shields, 1997).

2.7 Final Remarks

When thinking about organisational communication it is important to establish what is known, who knows it and who is not supposed to know it. Although the importance of information adequacy in organisational communication has been recognised for many years (e.g. Lampreia, 1992, Meulemeester, 1991, Bland, 1987), a problem persists in some Portuguese organisations.

Sometimes it is very difficult for the organisational members responsible for communication policies to decide what type of information should be transmitted to employees. It seems that the solution to this problem is easier than it seems. Employees should receive information about everything that can directly or indirectly affect them. Questions can be raised as how should employers interpret and respond to employees' requests concerning the amount and content of information they want? And how this information should be transmitted, i.e. what are the mechanisms that should be used? It is true that employers should not be given the exclusive right to decide this and according to Neher's (1997) study, employers rely too much on written methods and employees prefer face-to-face methods. However, this creates a paradox. Employers have increasing difficulty in sending greater amounts of information to more and more people in the organisation using a method that is much more time consuming, and when this method can lead to the distortions that occur when a story is passed from one person to the other. The larger the organisation the greater the likelihood of the type of occurring problem. It seems that employers have to choose the kind of information that can be transmitted in written form as distinct from that which can be conveyed orally because it will generate greater impact. In this case they can avoid distortion, by not sending the information from level to level, but by preparing a meeting and transmitting it directly to the employees.

Evidence tells that organisations are complex and sometimes chaotic. An understanding of organisational communication can allow us to become more effective in participating in and dealing with organisations. Individuals are surrounded and dependent on many organisations. Organisations play an important role in people's

lives. Unfortunately, if the communication process does not work well, people become unhappy with the role of organisations in their lives, and with the roles that they themselves play in these organisations. Without the establishment of formal communication networks an organisation would be even more chaotic, employees would not know the tasks they were supposed to perform, organisations would not be able to disseminate information that is essential to their functioning, and it would be impossible to call them "organisations". The problem as outlined above, is that some organisations may be using these channels improperly, i.e. they use downward communication networks only to carry information about organisational policies, procedures and obligations, and upward communication only to receive feedback on these topics.

In organisation communication it is also possible to observe an informal system, i.e. a group of interactions that are not officially defined (Daniels, 1997), and that can somehow be the result of non-verbal communication cues. Not everyone will agree that the non-verbal communication cues that were referred to in the previous section help the creation of informal communications and relations, i.e. relationships and behaviours that were not formally established by the organisational communication charts or structure. It is possible to argue that this is not the result of incomplete structures but rather an aspect of organisational communication life.

The organisational chart dictates who communicates with whom formally, and which way the information flows. In contrast the non-verbal communication cues create a kind of informal chart, where the established formal directions are not respected or are reinforced. Employees may feel free to talk with other members whose communication relationship is not formally established, they may do this because they are co-workers, because they see the other as a source of important information, but also because they share the same space in the production-line or they are waiting to have a meeting with their employer, or because they share a similar space outside the organisation and they know each other from outside the work place. Whether they talk about football matches, or company policies and rules, they are still establishing informal communication links that were not established in the formal structure. The establishment of these informal networks depend to a large extent on the degree of communication freedom allowed

inside the organisation, and this once again can be the result of non-verbal communication cues.

Employers and those people responsible for organisation communication, should not forget that informal communication is the result of a group of non-verbal cues, and that they can make employees feel more or less free to express themselves in ways that are not predicted by the formal structure. Non-verbal communication cues are a kind of "voice-off" that give important information about the way the organisation is working and the way it is treating its employees. However this kind of information may be more difficult to obtain because it is implicit in the way the furniture and the architecture of the building is organised and it includes conversations that happen in corridors, toilets, or canteens.

Ju (1994) demonstrates that in Japan it is not the formal organisational structure but the pattern of relationships and the formal arrangements of roles and relationships of people that are important in determining the achievement of organisational goals. They also valorise decision-making by consensus, and they practice lifetime employment in the majority of organisations. This has a profound impact on the way human relations are managed, it creates employee loyalty to the company, facilitates communication, and facilitates the company being willing to invest in employee training. In the reward system, for example, seniority plays an important role, although there has been an increase in the contribution of performance as a factor in determining reward. The advantage of the seniority system is that it eliminates competition between co-workers because everybody has the same opportunities, creating more harmony between employees. Ju points out that another difference between Japanese and Western cultures is that the Japanese workers not only continue training as a regular part of their jobs, but they also engage in rotating between various jobs at the same level. This not only creates flexibility, it also gives employees a broader perspective of the organisation experience, and allows employees to create a stronger circle of relationships and friendships which are positive for the development of the organisation. Moreover the relationship between superior and subordinate is like father to a child, and this does not occur in Western countries. The author suggests that these practices probably only work in Japanese and Asian cultures, that the Western countries could never adopt the paternalistic superior- subordinate relationship in organisations. He concludes that

although the Japanese practices cannot be used in Western countries, these countries should start paying more attention to the treatment of human relations.

In organisational life, differences in members' status and power are a fact of life. The structures of the hierarchies that exist in contemporary organisations create these differences. Members at the higher levels of the hierarchy often use power to secure compliance from those at the lower levels. The individuals at the higher levels of the hierarchy have power because they control the system of rewards and punishments; i.e. they control salaries, promotions, supervision, etc. The process of decision making is often centralised. Some organisations may be run as autocracies or as oligarchies. However, workplace democracy can be seen in those organisations where there are quality circles, freedom of movements, or shared decision making. Democracy in an organisation is largely a matter of communication, i.e. of democratic communication.

The traditional hierarchy of power and status in organisations often works as a barrier to communication, and more often than not, the upper and lower levels of the hierarchy do not communicate easily with each other (Byers, 1997). Lack of communication causes employee frustration. The majority of managers' attitude is "see no evil, hear no evil, speak no evil" (Cole, 1996). This author states that one way to reduce frustration is to keep employees informed through the use of regular staff meetings and the "Change Bulletin" to announce progress. Also by asking employees for their input in decision making, and creating a team of employees to evaluate and make recommendations as well as informing them how their input was used, and then asking them to measure its success. Furthermore, communication is based on our perception of reality, and the problem that employers and employees seem to live in "different worlds", their perception of reality is different and they both perceive only a small part of reality, they form opinions about situations and their opinions become their reality (Byers, 1997).

Through this chapter the researcher has tried to show that although more attention has been focused on the presumed value of organisational communication, and despite increased investigation into the complexity of this field, progress has been very slow. The need to identify the cause of organisational stress continues to be one of the

paramount issues facing organisational researchers and managers. The purpose of this thesis is precisely to investigate the relationship between organisational communication and the aetiology of stress.

What is missing in almost all the research that has been examined are data concerning the relationship between organisational communication patterns and behaviours and other organisational elements and phenomena. The majority of research has focused attention on the relationship between elements of organisational communication and job satisfaction, and as seen in the following chapter very few studies have given attention to gender differences.

The thesis, then, addresses a major lacuna in the literature. It examines the relationship between verbal and non-verbal communication and occupational stress in both men and women. Furthermore, this thesis will analyse the difference between the amount of information employees receive and the amount of information they think they need. It will also compare employers' and employees' perceptions of information distributed in the organisation. To accomplish this task the thesis began with an attempt to define stress and outlining the importance of its study, following the work of the European Commission and the Portuguese government in the field of stress, and then by an analysis of the literature pertaining to occupational stress. It reported and discussed the results of a group of field studies that have been undertaken in some organisations. The present chapter placed organisational communication within organisation theory, and outlined an analysis of the literature, including non-verbal communication and cue analysis, concluding with a discussion of the importance of formal and informal channels of communication.

The next chapter will discuss some studies in the area of gender research specifically focused on communication and stress, and will establish if there is a basis to consider these two groups separately. Gender analysis is very important because this variable can work as a mediator between communication and stress.

Chapter 3

Gender

3.1 Gender and Stress

There is a variety of gender issues affecting modern organisations. Stress, as previously discussed in Chapter 1, must be regarded as a complex phenomenon that results from the interaction between person and the environment. It is no longer possible to study organisational stress as being a result of *either* the environment *or* the individual. The previous two chapters looked at organisational stressors that have been considered by different authors, and suggests one that this study considers to be critical - communication. However, there are many extra-organisational variables that affect people's psychological health in different ways (Langan-Fox and Poole, 1995). The focus of this chapter will be on one of these aspects- gender.

It is recognised that individual differences play an important role in the impact of stress. Researchers have examined how personality factors, values and occupation affect stress (e.g. Kahn and Byosiére, 1990). However, the impact of gender on the reported levels of stress is not often recognised, and the majority of models do not consider this variable as having an influence on stress levels. As Kahn and Byosiére (1990) note in reviewing the literature, individual differences in the resistance to stress have frequently been analysed by some researchers, especially in relation to Type-A behaviour, locus of control and self-esteem, but rarely in relation to gender.

It is important to know whether women and men working in the same organisational settings show similar levels of stress, and to understand what organisation factors best explain any variation in the levels of stress. In spite of the number of papers and books associated with the study of work stress, it seems that many questions are still unanswered, and, as Barnett et al. (1987) note, research on occupational stress has focused primarily on men and therefore many biases and gaps exist. Furthermore, the majority of studies have analysed stress as something that affects both sexes equally, i.e. the issue of gender has received uneven attention (e.g. Fernandez and Perrewé, 1995, Taylor et. al., 1997). A review of the literature might lead to the

conclusion that, as Hearn and Parkin (1992) noted, organisational psychology and sociology has suffered from a neglect of gender issues, especially in the study of stress. Most of the literature assumes general processes that are reported as affecting equally both men and women. Other studies refer only to men (e.g. Chandraiah et al., 1996).

According to Hearn and Parkin (1992), although there was an upsurge in critical approaches to the study of organisations, it seems that they have focused on other issues such as class and organisational power, and although there is some signs of an emerging interest in the study of gender, it continues to be neglected. This happens because, as it will be seen in the next section, some authors argue that there are no gender differences. These researchers espouse a 'main effect' hypothesis, arguing that the relationship between occupational conditions and stress will not vary with gender. However as has been said, many studies have focused on the male population, precluding any possibility of assessing gender effects.

3.2 Literature review

Not all researchers agree that there are gender differences in the level of stress felt by men and women and in the appraisal/ coping mechanisms each sex uses. DiSalvo et al. (1995) undertook a study with a sample of 220 professionals (110 men and 110 women), concluding that men and women perceived stressors quite similarly. They found no gender differences in the overall clusters.

"For both men and women, more causes of work related stress stem from organisational activity of people working daily in interdependent roles than from the specific content of the jobs themselves." (Di Salvo et al, 1995, p.48).

Men and women differed in only four out of fourteen causes. Murphy et al. (1994) conducted a study with 670 male and 41 female fire fighters to analyse gender differences in the appraisal of job stressors and symptoms. They reported that both male and female had highly similar patterns of job stress and symptoms of stress, they were similar in sleep disturbance, wage/benefits concerns, safety and substandard equipment concerns. The differences occurred only in job skill concerns, which affected more women than men. A cross-sectional and longitudinal study (Barnett and Brennan, 1995) showed no gender differences in stress in 504 full-time, white, middle-class men and women. The subjects revealed they were more affected by two job conditions - skill discretion and job demands - than by job control, schedule control relations with supervisors or pay adequacy.

In contrast, some researchers, espouse an interaction-effect hypothesis, namely that gender moderates the relationship between organisational conditions and stress. Jick and Mitz (1988), for example, propose a stress model, based on the McGrath 1976 model, which includes gender. According to this model the stress process begins with stressors which can be events, situations or other factors. These stressors are cognitively evaluated, then the individual will try to cope with this situation in order to avoid the strain. Moderating all these levels are individual differences, especially gender. This suggests that men and women are exposed to different stressors, and that the

relationship between stressors, appraisal, and coping, and between coping and strain, may be moderated by gender.

Some differences between men and women have indeed been observed in examining stress levels, appraisal of stressors and coping mechanisms. Given the general and growing concern with gender issues in the workplace it is important to review the evidence of the relationship between gender and stress and to offer some directions for further study. This section will link the organisational and psychological literature in the area that has been referred to above. The idea here is that individual gender differences may influence the stress process at different levels. This can predict the source of stress and also affect the way stressors are perceived, which coping skills are used, and the way stress is manifested.

Researchers such as Martocchio and O'Leary (1989) reported that belief in the idea that there are sex differences in occupational stress was not supported. Their literature search identified all published correlations between sex and stress. A meta-analysis was performed in 15 studies that examined sex differences in occupational stress. From these 15 studies, data on 9,439 individuals were collected. The two researchers found no support for the idea that men and women experience stress differently (physiologically and psychologically). However, they also noted that the lack of a consistent pattern does not provide concrete evidence that gender differences do not exist, and may indicate a need for further systematic research on the topic. Recently, Trocki and Orioly (1996) reported that women seem to react to somewhat different stressors in the environment. They reported that men become ill in response to personal or family pressures first and work pressures second, whereas for women the reverse is true. They also found that specific stressors in the workplace differed for men and women. Women are more affected by job demands and men by role ambiguity and a competitive atmosphere. Neil and Snizek (1988) reported that within the same job, men were more likely to value job status, autonomy and ability to use their skills, whereas women were more likely to value relationships with others. Piltch et al. (1996) reported that job control was more important for understanding distress among men, and social support was more important among women. However, they noted that these were the only two gender differences found to be significant, and suggest that further analysis of

these differences is needed. Similarly Tausig and Fenwick (1992) reported that job demands were related to stress in men but not in women.

Zambrana and Palácio (1989) looked at a group of stressors and found higher stress rates for females in 21 of the 24 items considered. Ten of the 24 items were significantly different between the female and male respondents. There were significant gender differences in items related to family, loss and change. Kompier and Levi (1995) argue that men and women make a different evaluation of the workplace. They continue by saying that men typically give more value to power, competitiveness and personal performance; while women appreciate the existence of a nice environment, team work and co-operation.

Beens and Poduval (1992) reported that there are significant differences in the experience of stress between male and female executives, with women experiencing higher levels of stress when compared with men. They argue that this happens because women experience greater work changes and associated stress than men do.

In the specific case of female accountants Piccoli et al (1988, cited in Goh et al., 1991) identified stressors which can be particularly stressful for women. These were: job discrimination, cross-gender relations, career paths, time pressure, and home v. work pressures. In addition to these stressors some researchers have identified factors that can induce job stress, thereby reducing job satisfaction among female accountants.

Wagner and Compas (1990) analysed gender as well as instrumental and expressive traits as risk factors in relation to various categories of stressful events among adolescents. In relation to gender, their study found that female adolescents reported more stress than males, including more stress in their relationship with peers and family. Females reported more overall negative events than did males. Still, referring to adolescents, Wagner and Compas (1990) state that adolescent boys and girls may be differently sensitive to various kinds of events. Girls may have more personal investment in interpersonal events than boys do, and so are more at risk of experiencing negative interpersonal events, perceiving interpersonal events as more stressful, and experiencing symptoms related to this stress. Boys experience more stress than girls in what concerns achievement-related life events. Moreover, adolescent girls report more

major negative events than males, and are more at risk of experiencing stress related to negative events occurring in the life of others in their social environment.

Richardson and Burke (1991) reported that the sources of stress among male and female Canadian physicians were different. Both males and females find time pressures stressful. Women experienced medical practice as more stressful and were more negative about health care in general, and about the health care system in Canada. Financial concerns, e.g. maintaining an adequate income, were an important stressor for males in particular. Bernstein and Carmel (1991) reported gender differences in the perception of medical school stressors. Women were more concerned with professional status issues, while men were more concerned with academic demands. Girdler et al 's (1990) study with graduate medical and dental students found that females showed a greater cardiac output increase across all the tasks than males did, while males showed a greater increase in total peripheral resistance compared with females. These studies confirm once more that men and women perceive stressors and feel stress differently.

In another longitudinal study over a period of 21 days male and female college students were instructed, during a period of 21 days, to register the daily events they considered stressful and the coping methods they employed as well as their consequences. Ptacek et al (1992) examined gender differences concerning the use of seven coping strategies in terms of frequency of use, extent of use, relative use and the frequency each method was used first in the coping sequence. The results indicated that the male mechanism of coping is more problem focused, whereas women use a more emotion-focused coping strategy and seek more support. Ptacek and Dodge (1994) developed another study with students which was an attempt to control the effects of event type on sex differences in coping. The purpose was to define sex differences in coping with stressful life encounters. The authors found that although men and women were similar in their appraisal of the situation, they reported differences in preparatory coping. The results of their study show that women use emotion-focused coping, whereas men use problem-focused coping.

Sherman and Walls (1995), in a study of 120 female and 79 male undergraduates, reported gender differences in relation to three moderator variables - hostility, social support, and type A behaviour - to perception of symptoms and stress,

and no relationship in what concerns optimism. Soares, Prestridge, and Soares, (1992), as a result of their experience with university students, reported that stress differences in men and women were not of kind but of intensity. Males and females indicated the same high stressors and the same low stressors throughout the three years and on the two administrated tests. The most persistent source of stress for all individuals during these three years was time management and finances.

Geller and Hobfoll (1994) conducted a study of 61 men and 55 women employed by four Northeast-Ohio employers, to analyse how home and workplace support affects male and female employees' job stress and tedium. They also investigated the amount and effects of work and home social support for men and women. They found that women reported more tedium, but found no significant gender differences in experience of job stress, although women did experience higher levels of job stress. Both groups reported receiving similar amounts of support from their supervisors and co-workers.

Davidson and Cooper (1983) studied 696 female and 185 male managers. A factor analysis technique was carried out on 79 independent stressor variables, which included job, organisational, home and social characteristics for both male and female managers. They reported that for both men and women managers' workload was first a predictor of ill/health. The second factor affecting women was a positive leadership role and the third a positive management style. For men, exercise and the organisation came in second and third place respectively. In the stressors that grouped together female managers, the organisation was the first stress variable pin-pointed. Priority factors included: lack of support from superiors, lack of consultation and communication, lack of encouragement from superiors and a lack of power and influence. The second work related stressor was the leadership/authority role. The priority factors identified included managing/supervising people, disciplining subordinates, being the boss, or working relationships with female subordinates. The third factor was related to home/partner relationships. The stress variables that grouped together male managers were in a different order from those of the female group. For men, leadership/authority role came first, with priority given to being the boss, followed by disciplining subordinates and then managing/supervising people. The second factor for male managers was "the organisation", with lack of consultation and communication coming first (for women

managers the organisation came first, and the communication element is included in the organisation. Below, it will be asked if the same happens with blue-collar employees), followed by clarity of job role, beliefs conflicting with those of the company and lack of power and influence. The third factor was "work load", with priority given to taking work home, long working hours, work overload, etc.

As this indicates, researchers do not agree as to the existence of gender differences in stress and the character of these differences. A number of past studies however, show a general belief that both groups perceive stressors differently and feel different levels of stress. The varying findings may be the result of different measurements of the variables or a result of the different methodologies used. One purpose of this thesis is to investigate if there is any gender difference in the perception of communication problems and the effects of this perception on stress.

The acknowledgement of gender as an important variable in the study of organisational stress would be appropriate. However gender is largely ignored because of the theoretical conviction of the majority of stress researchers, and hence incorporation of this variable into research and theories of organisational stress is still incomplete. Except for a few studies, the majority of studies do not emphasise gender differences in appraisal, and none of the models talks about gender differences in the appraisal of communication. This seems to be an under-analysed field of research. It may well be that men and women react differently to communication inefficiency or problems, but the researcher believes that both groups are affected by communication problems.

3.3 Explaining Gender Differences

What explains the pattern of gender differences found in the studies mentioned above? Why do women usually exhibit higher levels of stress when compared to men? Historically the second half of the 20th century brought major changes in women's lives. Compared to even one or two generations ago, a large number of women are now working part-time or full-time. Although there has been some increase in the home roles for husbands and fathers, women continue to carry the larger workload at home, and at work they encounter more barriers to equal opportunity compared to men. Women are concentrated in the lower organisational levels, often with sex segregation and salary differences. Some differences in pay levels are expected, but even when both sexes have comparable educational levels, job credentials and categories there still are differences between levels of salaries. Moreover, despite the fact that women have entered the workforce in large numbers, the culture of most organisations is still based on male norms and assumptions (Berryman-Fink, 1997). If this is true of the studied organisations, women predictably will suffer more from stress than men, because the organisations' structure and communication policies will be constructed from a male perspective. They will not give importance to the communication aspects that women feel are important. According to Berryman-Fink (1997), to be successful and survive at an organisational level, women are expected to accept and assimilate the masculine way of doing things. A feminist organisation, according with Karsten (1994, cited in Berryman-Fink, 1997), would not be hierarchical, would have few rules, participative decision making, lateral communication, interaction as a way to solve conflicts, co-operation, teamwork, power based on expertise not on position, flexible schedules and benefits and corrective rather than punitive discipline.

Furthermore, it is important to know if differences in the level of stressors result from the fact that women use different strategies from men to react to specific kinds of stressors and whether women are more or less 'able' to communication effectiveness or problems than men are. Frone, Russel and Cooper (1995) suggest that most research on coping strategies has been done on men, and relatively little attention has been paid to

gender differences in modes of coping with occupational stress other than social support.

When a disorder selectively strikes persons from one geographical region, one social class, or one gender, one may ask if some characteristics of the affected group might be making its members vulnerable. Among the varying and competing explanations for the differences in male/female stress, several have elicited considerable interest. The literature provides several explanations for gender differences in stress, especially in what concerns the traditional gender role. A number of hypotheses have been developed to try to explain why women feel more stress than men. Genetic explanations are very limited, with the majority of researchers dismissing them (Jick and Mitz, 1988). Some studies look at hormonal differences (e.g. Ivancevitsh and Matteson, 1980), but others, as will be seen, suggest that differences in behaviour are not a result of hormones but a result of experience and social learning. Women have also been found to be more prone to unipolar affective disorders than men (e.g. Boyd & Weissman, 1981). A number of different explanations have been proposed to account for women's greater vulnerability to depression and some have attributed these differences to biological determinants. Matuzscek and Quick (1995) argue that although there are physiological symptoms of stress in both men and women, there is little evidence for the existence of a biological or genetic explanation for those differences.

According to Hobfoll (1990), the exposure hypothesis states that women may be more stressed than men simply because they are exposed to a larger number of stressors and also because they are 'exposed' to events over which they exercise little control. An article in the Euro Review (1997)⁸ states that women's dual role may increase the risk of stress. According to this article, women are still earning less and still hold less prestigious jobs. The Second European Survey (1997) indicates that the majority of women, compared with men, hold jobs where they have little control over the rhythm of their work. This depends on customers, patients, machines, and women have less control over their job routines. However, there are two general stereotypes that suggest

⁸ European Foundation for the Improvement of Living and Work conditions (1997). Stress at Work. Euro Review- on research on health and safety at work.

conflicting conclusions about who is supposed to suffer higher levels of stress as a result of multiple roles. One suggests that men suffer from more stress than women because they are exposed to stressors such as work overload, because they have to maintain their image of being providers, because they suffer from more conflicts trying to achieve leadership, and from career goal discrepancy when they fail to progress as rapidly as expected (Ivancevich and Matteson, 1980, cited in Jick and Mitz, 1985). On the other hand women possess multiple roles and experience inter-role conflict and role overload as they attempt to satisfy demands at both home and at work.

Hobfoll (1990, cited in Hobfoll, 1991) compares men and women's reactions to an event with the same meaning (their reactions to an ill child). Even when exposed to the same stressor, women had higher levels of stress than men, and this was seen as a cumulative reaction that could explain gender differences on stress. The results support the role overload model, i.e. women were more likely than men to miss work to stay with the child or to take him/her to the doctor or hospital. The suggestion is that this does not happen because men impose such roles on women, but rather as a result of the process of socialisation both men and women being perceived as natural. Women often define their role as more interventionist and may feel more responsible for their child's health than men. It was also noted that some men characteristically avoid stress by withdrawing from their social environment when confronted with stressors.

Furthermore, not all researchers agree that multiple roles cause stress, some suggest that the more roles a person has the better the person's mental health and self-esteem will be. Barnett and Baruch (1985, cited in Greenglass, 1995) reported higher levels of self-esteem in women who were mothers, wives and employees than in women with fewer roles. The idea is that the more roles a person has the more sources of self-esteem, status, privilege and social identity the person has.

Another important explanation of gender differences in the levels of stress is focused on the structural aspects of the situation. Folkman and Lazarus (1980) argue that differences in the levels of stress between men and women may result from the fact that they are exposed to different stressors. Matuzscek and Quick (1995) argue that gender differences in stress levels may result from differences in stressors or sources of stress; or from personality factors; or from different coping mechanisms. In the first area

five factors are considered that can cause gender differences in stress symptoms: organisation politics, legitimate power deficits, total workload, role overload and socio-economic status. It is the second factor that this researcher regards as the most interesting; that women suffer from a lack of legitimate power in organisations. Women are under-represented as supervisors; they receive lower salaries and fewer promotions. Women's positions are clustered at lower levels so they have less power, and have less control over their work.

A man's work is often assumed to be his central life interest and identity for and family is often assumed to have a similar role for women. Some authors suggest that the workplace as a source of stress for women has been frequently forgotten (e.g. Lennon, 1987). According to Lennon this must be regarded as a source of stress because women usually occupy low-level and low-paid jobs when compared to men, and these jobs are characterised by several sources of stress such as poor work conditions, discrimination, sexual harassment, job instability and lack of mobility. It is argued that differences are the result of different occupational positions of men and women. They also point to the fact that women usually have different opportunities for mobility, influence and promotion, and that the workplace is based on masculine stereotypes. It seems that the structuralists forget those men and women who occupy similar positions but suffer from different levels of stress.

Furthermore, according to Ptacek et al. (1992) many researchers appear to forget the fact that socialisation influences the type of tasks men and women have to deal with. If the different stress results between men and women are solely the result of differences in the type of stressors experienced, no differences between men and women should occur when they experience the same events. Moreover, due to the major changes in women and men's roles, many researchers are now questioning this previous gender differentiation in women's family roles and men's work roles. (Wiley, 1991) Men and women are often exposed to the same kind of stressors so the differences in the levels of stress between men and women may be the result not of the exposure to different types of stressors, but to differences in men's and women's responses to that stressor. Many men and women have similar responsibilities at work and at home. However this may not be the case with the group from the present study, because at this level of education and age the majority of males still hold to the traditional belief that women are

responsible for the children and housework. Although men have increased their contribution in domestic tasks, women still do the majority of work with children and housework in addition to their paid employment (Wiley, 1991). When people talk about responsibilities, women are still seen by others and by themselves, as being responsible for their homes and children.

It is possible that females may be identifying more stressful events than men because of their greater willingness to admit the occurrence of events. Women may also be more emotionally reactive to events than men, and this may affect not only subjective weighting of events but also the tendency to perceive events as negative, thus potentially increasing the simple count of negative events. It is unclear whether women are in fact more stressed than men or whether the male and female experience with stressors differs in ways that lead women to express symptoms, cope or seek help in ways different from men.

Gender differences in stress may be the result of men's unwillingness to admit to being stressed. This means that men and women may experience stress symptoms with equal frequency, and to the same degree, but because stress symptoms may be perceived as feminine, men are less likely to admit to them. It may well be that as with depression, for example, men and women have different ways to respond to stressors. Evidence from a number of studies suggests that men and women have different patterns of responding to their own feelings of depression. Men, when depressed, tend to engage in activities designed to distract themselves from their moods. Women when depressed tend to be less active and to ruminate more about the possible causes of their mood and the implications of their depressive episodes (Funabiki et al, 1980). It was found that male college students were more likely than female students to say that they coped with depression by thinking about other things, ignoring their problem, or engaging in physical activity. Female students were more likely to say that they would cut down on responsibilities and activities when depressed (Chino and Funabiki, 1984, Funabiki et al, 1980). Being active and ignoring one's moods is part of the masculine stereotype. Being emotional and inactive is part of the feminine stereotype. From a very young age children describe themselves and others in terms of sex roles stereotypes. Parents reinforce behaviours consistent with these stereotypes. Thus the very active response of males may be a result of their conformity to the sanctions against emotionality in men.

Rumination in women may not be directly encouraged by parents, but they are not simply rewarded for activity, as boys are (Dweck et al, 1978, Serbin et al, 1973). Also women may just be more likely to admit to stress symptoms than men.

The general findings suggest that males and females endorse distinctive patterns in the expression of depressive cognition and behaviours. Studies show that women indicate that they engage in self-deprecatory statements, abnormal eating behaviour, hostile statements, and written expression of feeling to a greater extent than men (Funabiki et al, 1980). Also in the same study, compared with men, women reported that they would be more likely to avoid social situations involving large groups of people, yet would go to a close friend to discuss the situation. Thus differences in the rates of male and female stress can be seen as a consequence of various sex roles, socialisation experiences, and stereotypes. Gender differences in stress can be viewed as a gender differences in the experience and expression of stressors that make women more likely to identify it in themselves, seek help for it, overtly express affective complaints, or become labelled by professionals as stressed.

Viewed from this perspective (and with the exception of the biological approach) the alternative approaches for explaining gender differences are not necessarily incompatible, since each may contribute to the final outcome. The hypothesis based on the process of socialisation states that men and women are reared to deal with stressful events in different ways. As a result of gender stereotyping and gender role expectations men are socialised to deal instrumentally with stress, while women are socialised to deal emotionally with stress and to seek support from others. So while women are encouraged to seek emotional support, men are not. This happens as a result of gender role socialisation. While women are socialised in the direction of being more sensitive to others' needs, men are reinforced toward being aggressive, achievement oriented and non-emotional (Korabik and Kampen, 1992). Ogus et al. (1990) reported that males were significantly more inclined than females to depersonalise. Thus in the presence of the same stressful situation men will favour problem-focused coping, whereas women will favour emotion-focused coping and will seek social support. However these expectations regarding women and men's coping mechanisms can be the result of sex-role stereotypes that are unfounded in certain way. Some authors have not found differences in men and women's coping mechanisms (e.g.

Keller, 1988), and other researchers argue that women were more problem-focused than men (Heppner et al, 1983).

3.4 Final Remarks

Although there are studies that try to understand the way men and women cope with stressful life or organisational events there are still some gaps. It is still difficult to say whether men and women cope with stress in different ways. Only a few studies have addressed this subject and therefore a consistent pattern of results is yet to emerge. The investigation of possible gender differences in the coping mechanisms is important not only because gender coping mechanisms may be a result of the socialisation process, but also because if men and women are found to use the same coping mechanisms then probably there are real biological differences in men's and women's reactions to stressors.

The increasing number of women in the workplace may have effects on communication within organisations. In relation to gender and the superior-subordinate relationship, Roesner (1990) says that women in management exhibit a "interactive leadership", being more collaborative with subordinates. Men tended to see the relationship as involving reward and punishment. In general it is believed that women rely on collaboration and sharing, while men rely on competition and status (Neher, 1997). The socialisation process can once more explain this, where women's play groups usually emphasise collaboration, while men's playgroups usually emphasise competition. It could also be because until very recently women, in general, did not hold important organisational positions. As women seek to achieve higher organisational positions, the differences between men and women may decrease. However, questions can still be asked about what happens to men and women that occupy similar positions at a shop-floor level. How do they perceive communication? What are the levels of communication men and women need to feel satisfied? Are these levels the same or are they different? Do they understand messages in the same way?

Stressors may or may not be perceived as harmful, threatening or bothersome. This work will not only analyse the effects of communication effectiveness on stress, but it also extends the analysis to gender differences. Women may not perceive

organisational communication characteristics that are perceived as being stressful to men and vice-versa. It is possible that communication deficits and problems are important organisational stressors that do not result in negative outcomes, rather their effects depend in part on the extent to which those men and women who are involved perceive it as stressful. In addition, it is perfectly possible that the levels of stress felt by men and women are similar but they have different ways of showing it, thus the responses may vary. As with depression, it may well be that women are more prepared to talk about their feelings than men are; and men may express their feelings not in words but in other kind of behaviours such as violence or alcohol abuse.

Being conscious of these possible problems and relationships, this research intends to analyse the relationship between verbal and non-verbal communication and occupational stress among Portuguese textile industry employees. Certain occupations such as mining, police work, and health professions are regarded as providing the highest stress levels. However, regardless of how one job may differ from another in terms of stress, it is recognised that every job has potential stress agents.

To establish the relationship between verbal and non-verbal communication, occupational stress, and gender, this research will attempt to answer questions such as: What is the quantity and quality of verbal communication between superiors and subordinates? What is the quality of non-verbal communication between both groups? What is the level of stress felt by employees? How does verbal and non-verbal communication affect employees' occupational stress? Are employees happy with the amount, frequency and level of information they receive? Are there gender differences in the relationship between verbal and non-verbal communication quantity and quality and the levels of occupational stress? Are these differences a result of different kinds of interpretations or coping mechanisms between men and women?

The following chapter describes the methodology used to carry out this study, and will justify the methods used. It forms a bridge between the theoretical chapters and the findings. The chapter will outline how the study was carried out, as well as the various problems and difficulties faced by the research.

Chapter 4

Methods and Methodology

4.1 Introduction

To break the stress cycle it is necessary to identify and modify the stressors. This identification can give the organisation clues in helping its members find mechanisms to cope. The intention of this research was to evaluate verbal and non-verbal communication as a possible factor in stress. To do this, the quality and the quantity of verbal communication and the quality of non-verbal communication analysed in two Portuguese textile companies. The way these two types of communication affect employees' levels of stress was also analysed. The intention of this study was to see if there was a negative correlation between the variables 'communication' and 'stress'. The methodology used to design, collect, analyse and interpret the data, the observational work, the questionnaires, and the reasons for the choice of this methodology are described in the following pages.

The chapter starts with a description of the research design in general terms. It explains why the research used a triangulation of methods and why the questionnaires, interviews and the non-participant observation were considered appropriate to analyse the proposed relationship. This is followed by a description of the variables and the research hypothesis. The choice of industries is justified. The chapter proceeds with a general description of the way the data were collected and analysed. Here the researcher describes how data on verbal and non-verbal communication were collected. Then each research tool is fully described and justified. Finally, this is followed by subjects' characterisation in relation to response rate, gender, age, level of literacy and the number of years worked in the organisation. Due to the complexity of this Chapter, its contents are presented on the next page.

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4.2 Research Philosophy

“Neither method is “hard” nor “soft”- they are just methods, and their success depends solely on the researcher employing them”

Westmarland, 2001, p.9

Research methods are techniques for gathering data and are generally dichotomised into being either quantitative or qualitative (Westmarland, 2001). Qualitative, interpretive⁹ methods typically involve words, and quantitative data involve numbers. Qualitative research is inductive, quantitative is deductive. Qualitative research does not use a hypothesis to begin the research. In qualitative, interpretative research, theory may be generated by the evidence during the study. Positivist¹⁰, quantitative researchers develop hypotheses prior to the study (Mellon, 1992). A qualitative research approach emphasises meanings, experiences (often verbally described) descriptions and so on. The raw data are exactly what people have said in interviews or recorded conversations, or a description of what has been observed. The can be quantified but usually they are not (Coolican, 1994). An interpretive, qualitative approach attempts to understand the world from the viewpoint of the actors, it is oriented towards detailed descriptions of the actors' cognitive and symbolic actions, i.e. the meanings associated with certain behaviour (Wildemuth, 1993). Positivists intend to discern the statistical regularities of behaviour, and their method is oriented toward counting the occurrences and measuring the extent of the behaviours that are being studied. In quantitative studies the researcher is ideally an objective observer who neither participates in nor influences what is being studied (Lessart *et al* 1990). However, there has probably been too much energy expended on debating the

⁹ “ a variety of forms of sociology united by an emphasis on the necessity for sociologists to grasp actors' meanings.” (Collins Dictionary of Sociology, p.326)

¹⁰ “doctrine formulated by Conte which asserts that the only true knowledge is scientific knowledge, i.e. knowledge which describes and explains the coexistence and succession of observable phenomena, including both physical and social phenomena.” (Collins Dictionary of Sociology, p.484)

differences between the relative differences and advantages of qualitative and quantitative methods. Both quantitative and qualitative methods are based on rich traditions that come from different disciplines, and it seems that what makes for a good piece of research is less the method used, and more how it is used, and what it is used for. As it is stated by Parker (2001: 1) *"it is not necessary to set qualitative and quantitative traditions in a diametric opposition to one another, and we would lose sight of the value of much qualitative research if we were to do so."*

Quantitative data has been criticised by feminist researchers who consider this method to be too simplistic to examine the complexity of the social issues being addressed, of being a construction of reality, and of treating all individuals as being equal units (e.g. Farran, 1990, Pugh, 1990, Graham, 1983). However, Erikson (1986) uses the term interpretative investigation to refer to qualitative analysis because, according to him, it is impossible to characterise this analysis as being merely non-quantitative. Reinharz (1992), too, highlights that quantitative data can be important in looking at the prevalence and distribution of particular social problems. Gelsthorpe (1990) reports that the problem is not quantification but insensitive quantification, and Morris (1990) argues that quantitative research can have a great value depending on the questions being asked, and that it can be useful in producing background data.

Qualitative methods (like ethnography) talk about developing a relationship between the researcher and the subjects, but data can be analysed either in a quantitative or qualitative manner - content analysis of field notes or transcribed interviews are ways of quantifying text (Olson, 2002). Qualitative methods give more room for the researcher to manoeuvre in questioning the participants and in deciding what observations are more worthwhile, but the price is a potentially greater individual bias and less comparability across studies. Qualitative research is subjective. Meanings are implicit and sometimes unconscious. This causes methodological difficulties to the researcher (Lessart *et al*, 1990). Qualitative research connects the environment to the respondent, but quantitative research also considers the environmental context in data gathering, especially space and time (Olson, 2002). Latour (1987) reports that quantification is just an example of a more general process of deriving order and meaningful abstractions from data in science which can be transferred. Qualitative and

quantitative procedures are just different forms of re-representing in science. Qualitative research acknowledges that multiple realities exist. However

“In qualitative research, as in other research traditions, data are collected from the empirical world, these data then form the basis for conclusions about the empirical world. Any set of data is in fact, a subset of possible data about any phenomenon, and many of the key issues in data collection across all research traditions address the problem inherent in using a subset as a stand-in for a larger data universe” (Dervin , 1993, p.439)

The present research used triangulation¹¹, combining several different methodologies, measurement techniques and data analysis, in an attempt to enhance confidence in the results. It used questionnaires, interviews and observational analysis allowing the research to avoid the limitation of each method. An anonymous questionnaire design was used allowing for the study of a larger number of subjects. This is a widely accepted method in the study of stress and communication and is not so intrusive as other methods such as the diary method, or physiological measures of stress. The interview was used when appropriate because interviews can be moulded to each individual and each context, and they give richer information on the interviewee's own terms. Observation was used to collect information on non-verbal communication. Observation allowed more generalisation of findings and allowed the researcher to see things for him/herself. No video cameras were used because these would increase employees' surveillance and could bias the analysis of the democracy and power variable. An experimental method was not used because the researcher was looking for a long-term influence on stress. Experiments create artificial conditions that could bias employee behaviour.

Positivism was accepted as the dominant framework, but it was considered only one of the appropriate approaches for a study of this nature. Other alternatives were ethnography and employee interviews. However, there were a number of research limitations that did not allow the use of these methods.

¹¹ All the methods will be fully described and justified in the next sections of this chapter

In ethnography the researcher participates actively in the research environment, s/he participates in people's lives for a certain period. S/he watches, listens, asks questions, analyses documents, that is he/she collects data concerned with the research topic (Taylor, 2001). Semi and unstructured interviews are claimed "*to convey a deeper feeling for or more emotional closeness to the persons studied*" (Jayaratne, 1983, p.145). The interview can be complementary to survey research because it can give a deeper and more complex knowledge of the survey issues (Westmarland, 2001). However, ethnographic work and interviews require access to the setting and to the "actors and actions". Clearly, the researcher needs to have access to the field. The way the field relationships are established influences the data the researcher can obtain (Taylor, 2001). In this study the researcher had limited time access to the production-line. Moreover, interviewing is time consuming and suited to a study with a small number of interviewees in order to do justice to the material generated (Burman, 2001). The researcher was not explicitly allowed to talk to all employees. It would not be easy to negotiate field relations in this case. During the time the researcher spent in the organisation the researcher was often perceived with some hostility, probably because some employees did not believe she was an academic and thought she was working for the organisation. As Hunt (1989) noted women are usually treated with more suspicion than male researchers when anything serious is being studied.

4.3 Research Design

The design of this research is complex in the sense that several methods were used. A questionnaire was used. Not only were people asked to report when and how they communicate (in order to understand the nature of a particular communication process), but people were also asked why they communicate as they do. An interview design was used to gather information from the managers. The research also used a non-participant observation design where the researcher was not part of the group being observed. The researcher was a distant observer who had no effect on the behaviour being observed.

The choice of these methods was based on the following reasons:

It is important to use several different methods to collect data, especially if they can provide different data types. As Cooper (1991, p.1583) argued, simultaneous use of multiple methods of data collection allows the researcher to obtain more substantial findings. He that "*the use of single methods of data collection may lead to some highly misleading conclusions*". The use of triangulation - i.e. the process of combining several different methodologies, measurement techniques and data analysis - enhances confidence in the results. Thus the combination of several methods in one study allows each method to supplement and check the other methods' limitations (Giddens, 1993).

It was considered that it was not appropriate to use an experimental method because the researcher was looking for a long term influence on stress. If the researcher wanted, for example, to test a new communication policy, it would be necessary to wait for several years to see the effect of this change. Moreover, an experiment creates artificial conditions that could bias employee behaviour. The subjects behave more naturally the more unaware s/he is of the observer. (Coolican, 1994)

The researcher used observation to collect information on non-verbal communication and not video cameras (where the information would probably be more easily recorded),

because a large number of cameras would be necessary as in the study conducted by Corman and Bradford (1993). They concluded that several cameras were needed, possibly one per person, to record all signs of non-verbal communication. Moreover, this would increase the surveillance of employees and could bias the analysis of the democracy and power variable since employees would feel more observed than they usually are.

An anonymous questionnaire design was used because, as it will be argued in the research tools' section, it allows for the study of a larger number of subjects (Giddens, 1993), who can be more honest because they cannot be identified. Moreover, as Frey *et al.* (1990, p.29) argue "*Self reports are extremely effective for measuring respondents beliefs, attitudes and values, because these exist inside people's heads. They also may be accurate indicators of people's behaviour.*". Consequently, the use of questionnaires is very common in the social sciences (Fife-Schaw, 1995), and it has a long research tradition (Oppenheim, 1992). The use of questionnaires is widely accepted in the study of organisational communication (e.g. Callan, 1993, Allen, 1992, Wheelless *et al.*, 1982, Pincus, 1986) and in the study of stress (e.g. Carson and Hardy, 1998, Agius, *et al.*, 1996, Summers *et al.*, 1994, Hochwarter *et al.*, 1995, Jones *et al.*, 1995).

The interview was used when appropriate because interviews can be moulded to each individual and each context, and they give richer information on the interviewee's own terms (Coolican, 1994, Giddens, 1993). The use of interviews will be explored and justified in the research tools section.

The use of non-participant observation was chosen (as will also be seen in the research tools section), because it allows theory building, it allows the observer to see things for him/herself, and it allows subjects to feel more comfortable than when experiments are being made. This method allows objectivity in recording data because the researcher is not biased by participating with research subjects. The data acquired through participant observation may be less objective because researchers are involved more intimately with the people they study. (Gold, 1958);

The researcher decided to modify the existing stress and communication measures to allow focus on specific elements of the research question.

4.3.1 - The variables and hypothesis

Within this study verbal communication quantity and quality and non-verbal communication quality were used as independent variables and stress as a dependent variable. However it was possible that the effects of one on the other might be a two directional process. Verbal communication covered the levels of 'Downward Communication', 'Upward Communication', 'Feelings Towards the Workplace' and 'Democracy and Power'. The Non-verbal communication comprises aspects such as the organisation of space, the use of space, and body language when superiors and subordinates were communicating. The non-verbal communication analysis was considered important for two main reasons: communication is not restricted to verbal cues, there are other elements like those referred to above (the use of space, body language) that also "communicate" (e.g. Porter and Roberts, 1991)

in the same way that the verbal communication affects employees' health (e.g. Callan, 1993, Schweiger and Denisi, 1991, Pincus, 1986), non-verbal communication could also be influencing people's health and the way they perceive their work environment.

This study only intended to focus on work related stressors. It is true that work does not constitute all of one's life, although, as McGrath (1991) indicated, the bulk of research in organisational psychology and organisational behaviour could be accused of making such an assumption. There is a tendency to study the relationship between work related variables without reference to employees' lives outside the organisation. The point is that although it is known that people's lives are not organisationally restricted, most people spend a third of their days at work during their working life. As shown in Chapter One employees often report that their jobs are the major source, or even the single source, of stress (Beehr, 1995). Therefore, it seems very important to find those factors that are causing stress in organisations. It is true that when, for example, employees are responding to a work stress questionnaire external factors may influence the response and thus result may indicate high levels of stress, not because that organisation has communication problems, but because that particular individual is having problems with his or her spouse, or someone in his or her family is ill or has died recently. However there may be another individual who is particularly happy that day

because he or she has received good news from his/her family. In this study, the questionnaire has been designed to avoid this kind of situation, and questions such as those related to sleeping problems in the last three months will avoid biased responses caused by temporary mood states.

The first purpose of this study was to explore the belief that:

There is a communication quality and quantity deficit in the Portuguese organisations being studied

The major focus of the study, however, was to test the following three hypothesis:

H1 Verbal communication problems will make employees feel stressed, these levels being different for men and women

H2 Non- verbal communication problems will make employees feel stressed, these levels being different for men and women.

H3 There are major differences in employees' and employers' perceptions of organisational communication, with employers perceiving communication as being more efficient.

4.4 Procedure

4.4.1 The Choice of Industries

This research was based on the analysis of the relationship between communication and levels of stress in both men and women in the Portuguese textile industry - using a small and a large company. The reasons for this choice were economics and the market. In Portugal this type of industry is characterised by small, family industries, that have an export tradition (Jornal de Notícias, March 2000). This type of industry is concentrated in the north and dominates that local economy (European Community Commission, 1998). It was decided that it would be appropriate if a comparison of the relationship between both variables was made in two companies of different sizes. They not only have different levels of activities and production but also their different economic status, may give the observer a picture of possible differences in communication and stress levels.

To analyse the proposed relationship between communication quantity and quality and levels of stress several avenues of data collection were explored. This included direct contact with industries, the collection of data through the use of questionnaires, interviews and through observation. The results were subjected to statistical analysis.

4.4.2 Data Collection

Organisations were sent a letter (Appendix I) in which the purposes of the study were outlined and where a guarantee was given that the study only had academic purposes, and where description and anonymity (if requested) was also guaranteed.

However, there were some problems in relation to the collection of this type of data. Not all organisations were available or predisposed to having a stranger analysing their levels of communication, and especially their employees' levels of occupational stress. There was no reply from the ten organisations contacted and consequently it was decided that the organisations should be contacted alternatively by telephone. During these telephone calls the companies were informed about the academic purposes of the research and attempts were made to arrange a meeting. The phone call was successful with two organisations and access was arranged.

The questionnaire allowed for the collection of data concerning employees' perceptions of verbal communication and employees' levels of stress. Regarding communication, the questionnaires were completed by a group of employees, who through the process of recall indicated the methods they used to communicate with their superiors, the methods the superiors used to communicate with them, the frequency of the communication between them and the content of this communication. Visits to the company would allow the researcher to collect data related to the non-verbal communication cues, such as the positioning of employees in the organisation of space or the temperature and light existent in the production line. The reasons for the use of questionnaires and the observation method will be given later in this section. .

4.4.2.1 - Verbal communication

The questionnaires were distributed to the employees on a given day and then two days later the employees were asked to leave the questionnaires in a box located at a previously agreed place. Employees were offered the opportunity to be informed about the research purposes and were free to not return the questionnaire if they preferred (response rate is provided in the subjects section). The employees were aware that the researcher was doing academic research and that she was not affiliated with the company or under any contractual obligation. Thus employees took the questionnaires to their homes and then responded to them whilst not constrained by time or superiors. This procedure had some benefits especially avoiding some potential validity problems. This method avoids researcher influence affecting subjects' responses, and it stops the

researchers inadvertently letting subjects know what the desired answers are (Coolican, 1994).

4.4.2.2 Non-verbal Communication

The study of non-verbal communication was based on observation, no independent variable was manipulated. Nevertheless the independent variable, non-verbal communication, was tested, i.e. the researcher observed non-verbal communication cues (those specified in the checklist) and predicted its effect on levels of stress. To collect data on non-verbal communication the researcher visited both organisations looking at both offices and production lines. During these visits it was possible to observe the differences between both environments and to check the different points of the checklist. Explanations about the way supervision was undertaken were given. During these visits the researcher was allowed freely to circulate in the production line area without any guide, and to stay there as long as was considered necessary.

4.4.2.3 Contact the National Institute of Statistics and the European Foundation for the Improvement of Living and Working Conditions

To collect data about organisational absenteeism, as a result of stress, the number of stress cases in Portuguese industries, and to examine what was being done at the European level and by the Portuguese government in this regard, the European Commission, as well as the Instituto Nacional de Estatística (National Institute of Statistics) were contacted. The first one to be contacted was the INE. A letter was sent with a description of the study and a list of required data that was considered important to the study - number of stress cases in Portugal, preferably in the textile industry, money spent by the government as a consequence of stress related absenteeism. Four months later there was still no answer, and this time the Institute was personally

contacted. However, no data was forthcoming, and the answer from the three contacted workers was unanimous - in Portugal there were no surveys in this area.

Help came from the European Foundation for the Improvement of Living and Working Conditions and from the "Instituto de Desenvolvimento e Inspeção das Condições de Trabalho do Ministério do Emprego e Segurança Social"¹². Neither could provide figures for the Portuguese industries because they did not have any specific studies. However they provided some booklets, which are described in the stress chapter, that give some clues about what is being done by the European Commission. The Portuguese Institute also provided the list of work diseases, that is also referred to in the stress chapter.

4.4.3 Data analysis

After scoring each question according to the rating scale, scores were aggregated so that each employee result on communication and stress could be obtained. The computer programme SPSS for Windows was used to analyse data. This allowed the calculation of Means, Standard Deviations, Pearson's Product Moment Correlation, T-tests and ANOVA. Communication and stress Means and Standard Deviations were calculated. Pearson Product Moment Correlation was used to check the relationship between these two variables, and the relationship between the four communication scales and stress. A t-test was performed to analyse the effect of good and bad communication on stress, and of gender on the levels of stress. ANOVAS were calculated to see if there was a main effect of communication on stress, and if there was an interaction between the four communication categories and gender.

¹² Institute for the Development and Work Conditions Inspection from the Ministry of Employment and Social Security

4.5 Research Tools

The literature review in chapters 1, 2 and 3 has shown that there are some gaps in the study of organisational stress and communication, especially in the relationship between both variables. It was the researcher's intention to study this relationship. To this end a selection and preparation of research methods was carried out.

4.5.1 - Questionnaires and Check List

4.5.1.1 Questionnaires

The questionnaire method was intended to explore the relationship between verbal communication and stress. The front page gave subjects information about the nature of the study and asked for demographic information, like age, gender, level of education and number of years in the organisation. Two basic sections comprised the questionnaire: The Organisational Verbal Communication Questionnaire (OVQCQ) and the Work Stress Questionnaire (WSQ).

The use of questionnaires seemed to offer several advantages:

First, as was previously stated, the use of questionnaires in the study of communication and stress is widely accepted (e.g. Callan, 1993, Allen, 1992, Wheelless *et al.*, 1982, Pincus, 1986, Carson and Hardy, 1998, Agius, *et al.*, 1996, Summers *et al.*, 1994, Hochwarter *et al.*, 1995, Jones *et al.*, 1995); it allows the study of a higher number of subjects and consequently a more representative study, and it is not as time consuming as other methods such as interviews (Quivy and Campenhoudt, 1992).

Second, the subjects can more easily be honest because they know they do not have to identify themselves, and they will not feel afraid of being reprimanded in the event they are critical of their work place.

Third, there are several ways to measure stress. Some researchers prefer the diary method (e.g. Ptacek *et al*, 1992), some use questionnaires or scales (e.g. Chandraiah *et al.*, 1996, Langan-Fox and Poole, 1995, Motowidlo *et al.*, 1986). Other authors prefer physiological measures, such as blood pressure, pulse rate, or electric signals from the brain, and the amount of certain hormones present in the urine (e.g. Peter, 1995, Fox and Dwyer, 1995, Frankenhauser *et al*, 1989). The researcher decided to construct and develop a questionnaire where both the psychological and behavioural responses to work stress were used. There were three reasons for the use of these measures:

A) The physiological responses to stress were not considered because they are much more difficult to measure without intruding on the workforce. According to Kahn and Byosiene (1990) they include cardiovascular symptoms, such as blood pressure, cardiac activity, cholesterol level, and also biochemical measures and gastrointestinal symptoms. Moreover, the use of questionnaires allows the study of a larger number of individuals when compared with physiological measures, that are intrusive, and are themselves stressful and not always practical.

B) The diary methods are more subjective because they are the result of the researcher personal analysis, so the bias can be high. Moreover it was not appropriate to use with a population such as the one studied in this thesis, who would have difficulties in understanding what was being asked and who probably would see this as an intrusion in their lives. Also this kind of method takes much more time. Furthermore, according to Coolican (1994) the response completion rate is likely to be low.

C) The use of a psychological and a behavioural scale to measure stress was based on the fact that these are the two categories of possible responses to stress that are usually referred to in the literature, and

several studies have proved the relationship between stress and these responses.¹³

4.5.1.1.1 Scoring the questionnaires

The **Organisational Verbal Communication Questionnaire** has four different type of scales:

1-Employees would have, for example, a list of channels to communicate upward or downward. More points were provided for those channels that were more personal.

2- A scale going from "*Almost always*" to "*Never*" was provided in questions such as number 2, 3 or 6 (e.g. Do you get information on how you are doing at work?). More points were attributed to "*Almost always*" because as in this example this would mean that the communication was better than if the answer was "*Never*".

3- *Yes* and *No* questions- The points would vary depending if it was a positive or negative question. (e.g. number 5 was a negative one "*Have you ever made a mistake because of inadequate information*"- *Yes* would score 0 and *No* would score 1; question number 11 is an example of a positive question "*Do you find you have all the information you would like to have about your work*". In this case *Yes* would score 1 and *No* 0.

4- Questions like number 4 and 20- would have the highest result if the employee ticked all the options, and would have one point less for each point they did not tick.

The Work Stress Questionnaire had two parts:

To measure the psychological responses to stress the Likert Scale was used.

To measure the behavioural responses to stress there were three different scales:

¹³ See Kahn and Byosiére (1990) for a literature review in the responses to stress

1-*Yes and No* scale (e.g. "*Do you usually smoke?*")- 1 point was given to *Yes* and 0 to *No*- the higher the result of this scale the higher would be the level of stress felt by the employee.

2- Temporal scale for questions such as "*If you have any of the sleeping problems mentioned above when did they start?*". The longer the behaviour was maintained the higher is the score attributed.

3- Quantity scale for questions such as "*How many cigarette you smoke every day?*"-the higher the quantity the higher the score attributed

4.5.1.1 A)- Organisational Verbal Communication Questionnaire (OVCO)

This questionnaire was prepared in order to measure verbal communication quantity and quality. The Organisational Verbal Communication Questionnaire is a 23 item questionnaire, composed of the following four scales: Upwards Communication, questions 13 and 14, (e.g. *"At your request did you communicate with your supervisor in the past month?"*); Downward Communication, questions 1-5, 10 and 11, (e.g. *"Do you get the information you need about your work?"*); Feelings Towards the Workplace, questions 6-9 and 12, (e.g. *"How often do you feel proud to work for this organisation?"*); and Democracy and Power, questions 15-23, (e.g. *"How many breaks are you allowed during a working day?"*).

The selection of these four scales was based on an accumulation of previously acquired knowledge, concerning the elements that are considered important, at a communication level, to the construction of a positive internal and external organisational image. A good internal image results from employees' positive feelings about what is done by the company where they work, This includes the way superiors talk to them and the methods they use to do so, the methods as well as the freedom they provide employees with in regard to upwards communication. It also includes a series of feelings that result from the way they are treated and which make employees wear the "organisation shirt" or not (e.g. Lampreia, 1992, Meulemeester, 1991, Bland, 1987).

This questionnaire has both open-ended questions, and fixed choice attitude scale questions. Fixed choice questions *"are easy to compare and tabulate, since only a small number of categories are involved"* (Giddens, 1993, p.687). The use of open-ended questions allowed us to obtain richer information and it makes the questionnaire more realistic, allowing employees to give their own opinion and not feel frustrated by the constraint imposed by a questionnaire composed solely of multiple choice questions. According to Giddens (1993), open-ended questions are more flexible and they can probe more deeply in order to ascertain what the respondent thinks.

The questionnaire took approximately 15 minutes to complete. Each individual could score a maximum of 103 points, indicating the perception of a very good communication quantity and quality, and a minimum of 0, indicating the perception of no communication at all. The cut-off point of this scale is 42, meaning that the scores under this value indicate poor communication, and scores at or above this level indicate good communication. This point was determined by adding up the higher and the lower values obtained and dividing by two. A copy of this questionnaire in both English and Portuguese is provided in appendix A. The rating scale is provided in appendix E

4.5.1.1.A1)-OVCQ- Managers Version

A second version of the Organisational Verbal Communication Questionnaire was designed to be administrated to managers in order that managers and employees' perceptions of communication could be compared. The questionnaire is composed of the same four scales. Two example questions from this questionnaire are: *What are the methods you use to give your employees information about their work?; or Do you give them information on how they are doing at work?*. A copy of this questionnaire in both English and Portuguese is provided in appendix B.

4.5.1.1 B) -Work Stress Questionnaire (WSQ)

To measure employee levels of stress a questionnaire was constructed based on employees' psychological and behavioural responses to stress in the workplace. The selection of scales was based on Kahn and Byosiére's (1990) list of psychological responses to work stress, which resulted from a vast analysis of the stress literature. These include: Alienation from organisation, Anxiety, Boredom, Burnout (emotional exhaustion), Commitment, Confusion, Depersonalisation, Frustration, Mental health (depression), Physical health (ulcers, coronary disease), Hostility, Irritation, Resentment, Self-confidence, Self-esteem, and Sexual maladjustment. The questions constructed to measure depression were derived from King and Kowalchuk's (1994) questionnaire- ISO 30- adolescent.

The WSQ was developed to assess the quality of work life expressed in the stress levels in many types of work settings. The psychological responses to stress scale consist of 42 attitude scale items that make up seven sub-scales. These scales are: (1) Commitment and Alienation (e.g. Kahn, 1973, Fisher, 1985) these are considered together because it was believed that when there is no commitment there is alienation - both are related to membership, i.e. to the employees' feeling of being part of that organisation (e.g. *"I would be happy for my own children to work for this company"*); (2) Frustration (e.g. Ford, 1985, Sterms and Specter, 1987) - the employee does not feel he is loved and understood (e.g. *"I feel valued at my work"*); (3) Hostility (e.g. Hurrell, 1985), the employee feels angry and irritated (e.g. *"I never felt like damaging the boss's property to get my own back"*); (4) Boredom (e.g. e.g. Kaufman and Beehr, 1986), the employee feels the work day never ends (e.g. *"I feel my work is very repetitive and/or monotonous"*); (5) Self esteem (e.g. Beehr, 1976) - if low the employee has no respect and love for himself (e.g. *"Superiors good feelings about me are a mistake"*); (6) Depression (e.g. Fusiler *et al.*, 1987) (e.g. *"I usually feel that people who are important to me at work do not understand my feelings"*); and (7) Anxiety (e.g. Hurrell, 1985) (e.g. *"I sometimes feel there is not enough air to breath"*). The individual maximum score is

126, indicating a high level of work stress, and the minimum score is 0, indicating the absence of work stress. A copy of this questionnaire in both languages is provided in appendix C. The rating scale for the psychological responses to stress is provided in appendix E.

The behavioural responses to stress were measured as follows:

Cigarette consumption rate (e.g. Howard et al., 1986) was measured by asking respondents to state the average number of cigarettes smoked a day. Four categories were presented ranging from 1-5 cigarettes smoked a day to more than 20 a day. To measure alcohol and coffee consumption (e.g. Caplan et al., 1975) respondents were asked to state the average number of alcoholic drinks that best would describe his or her drinking habits. As before a number of categories were presented in order for respondents to indicate their average consumption. Employees were also asked about their sleeping patterns and they had to answer three yes and no questions that analysed if they had sleeping problems or not. They were also asked about their eating habits and if they had gained or lost weight in the last three months. In all these categories respondents were also asked to indicate the duration of these habits and if they had changed in the previous three months. The individual maximum score is 91, indicating a high level of work stress, and the minimum score is 0, indicating the absence of work stress. The rating scale for the behavioural responses to stress is provided in appendix E

In the event, the behavioural scale had to be abandoned because when analysing the data it was noticed that almost half of the employees did not answer these questions. It was then concluded that these employees may have perceived this section of the questionnaire as being intrusive and consequently did not answer it, or gave answers that are not sincere. The psychological scale is more subjective and is not related to behaviours that are usually condemned as are the consumption of alcohol or tobacco, which were part of the behavioural responses to stress scale. Thus, abandoning this scale is not the result of considering it an unimportant scale for the measure of stress, but a result of methodological problems. It seems that this scale is easier to use in laboratory studies, or in studies where the population studied is not so afraid of recrimination.

4.5.1.a) Questionnaires reliability and validity

The questions were carefully phrased to avoid ambiguity and to select the type of words that would be easily understood by the group of employees that were going to be analysed. In order to pilot the two questionnaires, they were given to ten textile employees from a small company (not the one analysed) situated in the north of Portugal. The questionnaires were taken and distributed and collected by a production-line worker who worked in that company. The answers were analysed and some of the open questions were abandoned because there was a general tendency not to answer them. This may have resulted from the fact that this group of employees tended (as happened with the studied population) to have low levels of literacy; some of them not even having completed primary school¹⁴. As a consequence they may have problems in writing and expressing themselves. Some fixed questions were extended because more items were introduced. Although it is acknowledged that open questions deliver richer information, it was decided that a higher number of fixed questions should be used because it would be more appropriate for this type of employee; those who have low levels of literacy. Also the results would be easier to quantify and compare.

The psychological responses to stress were measured using a Likert scale. This scale type was used because: first, it is more objective than other attitude scales - for example it is more objective than the Thurnstone (Thurstone??) scale where judges cannot be completely neutrals; second, it makes statistical analysis easier than does the use of other scales (for example the Bogardus scale); and third, the possibility of having a "position response bias", i.e. a tendency for subjects to mark an extreme, is lower than in the Osgood *et al* scale (Coolican, 1994)

¹⁴ Until forty or even thirty years ago there was no compulsory study scheme. Consequently individuals that are in their forties and fifties may have not finished or even attended the primary school. However this was not the case of any of the respondents.

The construction of this scale begins with production of an equal number of positive and negative statements. A scale was attributed to the statements and so were scores. The psychological responses to stress of the ten questionnaires answered were split in two equal sections, containing the same number of questions for each scale. People's results from one half were similar to the other half, with a correlation of 0.89, meaning that the test had internal reliability.

The two questionnaires were also tested for external reliability. This group of workers was tested one month later and the two sets of scores were compared. A correlation was achieved 0.78.

The content of the questionnaire was discussed not only with supervisors but also with some colleagues to ensure validity and it was agreed that it was measuring what it intended to measure

4.5.1.2 -Non- Verbal Communication Checklist

A checklist to analyse non-verbal communication was constructed. This list is composed of 13 checkpoints, and it was used to help the researcher make observations in both companies (e.g. *How are employees distributed in space? – spaces, distances between them*). The checklist also contains some questions that had to be asked of the interviewees. Thus, the interview method was also used to collect information about non-verbal communication. The checklist helped in avoiding looseness and inconsistency with the structured but open-ended questions (e.g. *How many employees per supervisor?*). A copy of this checklist, in both English and Portuguese, is provided in appendix D

The construction of the checklist was a reflective process based on the experience of working for a year in a company of this type, the subjects the researcher has been lecturing on, as well as based on the literature reviews. The use of checklists allows firstly, for the collection of the target information they provide a framework, facilitating the data gathering process. Secondly, it allows consistency, i.e. it allows researchers to maintain the same questions and to observe the same aspects inter-organisationally. They are especially important in studies like this one, where more than one company is studied. According to Humphrey (1970, cited in Burgess, 1997) this strategy allows replication and comparative studies that can include a certain number of variables. Thirdly, they allow researchers to extend, modify or even abandon some of the topics in the light of the field study and as result of the researcher's growing knowledge about the subject and the company that is being analysed. Fourth, they allow researchers to be increasingly selective about what they want to analyse, avoiding having to go extensively through the entire check list.

4.5.2 - Interviews and Observation

4.5.2.1 - Interviews

Two interviews were carried out. The first one was with the head of one department in the larger company and the second one with the owner of the small company. The interviews lasted for around two and a half hours each. The interviews were arranged by telephone. It was then suggested an interview at the respective company should be arranged.

Prior to each interview some information about the company was gathered, especially concerning its products and exports. In this way an understanding of the company was possible, and when designing the interview the researcher tried to ask questions that would make sense to the interviewees and that would be acceptable to them. The aim of sorting questions was not to obtain a structured interview but to provide a list of things to be sure to ask about when talking to both interviewees. The researcher also avoided leading questions especially concerning the researcher's opinion about the way the communication policy should be inside one organisation. The interview started with both interviewer and interviewee talking about their background, training and interests in the area of inquiry. An explanation about the research purposes was given and the ways the company was able to assist were discussed. These meetings allowed the company to establish their limits, and it was agreed that confidentiality would be maintained. The researcher informed the interviewees that they were free not to answer any question they found too intrusive; they were also informed that they could interrupt or criticise a line of questioning. The researcher chose to take notes during the interview and not to use a tape recorder.

The majority of information obtained during these interviews was concerned with the companies' characteristics, production, number of employees, departments, development through the years, problems, and type of clients. The information was important because it increased understanding about the company and its culture. No

permission was given concerning divulging this information because they not only could identify the companies, but it could also allow other companies to have access to information that was considered to be internal. The information obtained from the interviews that can be divulged is related to elements of the non-verbal communication check list and are questions related to the existence or non-existence of a canteen (it was difficult to know if they were going to show me all the company sections), and the number of employees per supervisor (an element that would be very difficult to observe). All the information obtained through these interviews was noted in the checklist as soon as the researcher left the organisations. After the interview, in both companies, a tour of the organisation was offered.

The use of this type of interview brings several advantages:

First, as previously stated in the design section, the interview design was used because interviews can be moulded to each individual and each context, and they usually yield richer data, details, new insights, on the interviewee's own terms. (Coolican, 1994, Giddens, 1993)

Second, notes were not taken very often because of the nature of the information gathered in the interview, and also because having a notepad in front of the interviewee may inhibit him/her from talking. Moreover taking notes of everything an interviewee is saying may hinder the interviewer from maintaining a discussion and from hearing those aspects that are important for the investigation. This opinion is expressed by Quivy and Campenhoudt (1992, p.75) who say that *"taking notes systematically during an interview must be avoided. This process distracts not only the interviewer but also the interviewee who can interpret the notes rate as an indicator of the interviewer interest in his or her words. On the other end it is very useful to note a word once in a while in order to structure the interview (...)"*

Third, no tape recorder was used because this could result in less information, especially because this might result in less quantity and quality of information because interviewees could feel inhibited and would fear that the information

recorded in the tape may be divulged. The experience with interviews made in the past suggested that interviewees talk more freely when they know the interview is not being recorded.

Fourth, the interview was non-structured and no checklist was used during the interview because these may make the interview too formal and not natural, and may reduce the amount of information obtained (Oakley, 1981). (Burgess??)Burguess (1997) argued that when the researcher uses a structured interview he assumes that s/he has power over the interviewee, who is seen as subordinate, the researcher assumes s/he has the power to control the situation and have his or her list of questions answered. It is important that the interviewee speaks freely and in his/her own terms about a set of concerns the researcher brings to the interaction when the interviewee is not so articulate. *"The more freedom we give to the interview participants, the longer the interview is, the deeper and richer will be the obtained information"* (Almeida and Pinto, 1990, p.135)

4.5.2.2 - Observation

After each interview it was possible to make a tour of the company premises. This tour started in the offices and finished on the production line. This tour took around one hour in the large company and half an hour in the smaller company. During these tours the researcher was informed about the locale where each product was manufactured, the number of items produced each year, who the clients were, and the responsibilities of each group of employees. A couple of days later the researcher returned to the companies. The researcher spent another three afternoons in the large company and another two afternoons in the small company. During these visits the researcher paid attention to non-verbal cues such as the lights, the noise and the temperature; the number of windows; the machines' position in space; the employees' position in space; as well as the other checklist points. During the first visit it was possible to see the differences in the environments as the researcher was moving from the offices to the production line. The guide in both companies was the interviewee. The researcher had memorised the checklist to reduce the number of times this list had to be checked. This measure would allow the researcher not to lose environmental cues, and it would also avoid employees feeling they were being evaluated. This process of only completing the check list after the field work is often used by those who do field work (e.g. Humphrey (1970) observed homosexual behaviour in a public toilet and his notes were taken after leaving the toilet - cited in Burgess (1997)).

The field study involved behaviour observation in the organisations without any type of intervention or manipulation of an independent variable. This method was appropriate for several reasons

First, field research allows theory building, i.e. it allows questions to be generated and to test hypotheses that lead to theory development. In 1972 Bickman and Henchy claimed that some hypotheses could result incidentally during the observation of different and unrelated phenomena in field research.

Second, according to Quivy and Campenhout (1992) observation is a particularly appropriate method in the study of non-verbal behaviour concerning the way all participants behave, express opinions, physically space themselves during discussions, and arrange themselves in their physical setting. It allows for the study of behaviours and the effects they produce, as well as the use of space or the position of furniture in a certain place.

Third, non-participant observation was used because the presence of an observer may change the group's behaviour, because interactions cause behaviours that otherwise would not happen. The development of relationships may affect the researcher's analysis and report. As McGrath (1991, p.1355) state "*The artificiality increases the more the investigator exercises control over or carries out manipulation of conditions, and the more he makes use of obtrusive measurement techniques.*"

Fourth, this study also has more advantages than many communication studies that are done in artificial conditions. For example, many are conducted in laboratories using university students, which makes it difficult to generalise the results to the real world. The problem is that college students are not representative of the population at large, and as a consequence the results cannot be generalised (Lynch, 1982). Moreover, stress studies done in a laboratory setting are, according to McGrath (1991), subjected to effects of artificiality because the subject knows s/he is in an experiment, and any identified stress is likely to be attenuated in laboratory conditions.

Fifth, according to Coolican (1994) the laboratory is an intimidating place, it is very difficult for participants to feel at home, i.e. comfortable and confident.

Sixth, field research also permits the development of external validity, i.e. it enables the generalisation of findings from one study to different persons, settings and times. The more the procedures reflect what actually occurs in real life, the more the results are generalisable (Lynch, 1982);

Seventh, because there is nothing better than when things are seen at first-hand. It is not enough to receive information about the way the company works, or to receive employees completed questionnaires about their levels of stress and the organisation communication quality and quantity, without having previously visited the company offices and production line. There were several aspects, especially those related to non-verbal communication that had to be personally analysed and viewed and even experienced (for example the differences between noises in both work settings, or the temperatures in the production line). As was argued by Costa (1986) the researcher is the most important research instrument and it is important that s/he compares the information obtained through other methods (which reflects other individuals' interpretation of reality) and his or her observations of the phenomenon.

Eighth, it was important for employees to see the researcher, so that when they were asked to complete the questionnaires they knew they were provided by an academic and not by the company. This would stop them thinking the questionnaires were evaluating them, and not telling the truth.

4.6 - Subjects

4.6.1 - Employees

130 questionnaires were initially distributed in both companies - 80 questionnaires were distributed in the large company, and 50 questionnaires were distributed in the small company. 71 employees in the larger company and 44 employees in the small company responded. Thus, 115 subjects composed the initial employee sample. They were production-line workers from two textile companies in the north of Portugal. 19 questionnaires were excluded because respondents did not answer all of the questions. As a consequence the final sample comprised a total of 96 questionnaires. From these 96 questionnaires the sample included 80 females and 16 males that completed two questionnaires - one related to stress and the other to communication. The sample was distributed as follows - 41 females and 13 males worked in the large company; 39 females and 3 males worked in the small industry. The subject age ranged from 16 and 44 in the small company ($MD = 23.69$, $S.D. = 6.001$) and between 19 and 63 in the large company ($MD = 42.203$, $S.D. = 8.95$). The number of years they worked in the organisations varied from 0.4 and 13 in the small company ($MD = 5.22$, $S.D. = 3.73$) and between 1 and 33 in the large company ($MD = 22.78$, $S.D. = 7.706$). The workers educational level ranged from the 4th year of the primary school to the 9th year in both companies. However, the results were different in both companies in regard to the percentage of workers that finished each level. The distribution is this: in the large company 59% of workers had only finished primary school and 32.5% the 6th year; in the small company 66.7% finished in the 6th year, 23.8% finished in the 8th or the 9th year, and only 9.5% finished in the 3rd or 4th year of the primary school. Participation was voluntary and subjects received no payment for it.

Many individual characteristics might be correlates of stress, but this thesis restricts its attention to gender because it is an under-analysed field of research (Kahn and Byosieree, 1990) and as indicated in the literature review there is the belief that men

and women can experience different levels of stress (e.g. Korabik and Kampen, 1992, Girdler *et al*, 1990). The point is to see if gender differences affect stress symptoms. One of the reasons why it was difficult to analyse this was the fact that it was very difficult to obtain a similar sample of men and women working in the same place and holding the same positions, the majority of organisational samples are heavily male or heavily female and do not lend themselves to meaningful comparisons. This happens because although there is an increasing number of women working in organisations they usually occupy the lower levels of the hierarchy. Given these gaps it is much easier to obtain a homogeneous sample from outside the organisational milieu. However these studies present broad patterns that cannot be tested on organisational samples.

4.6.2 - Managers

Another sample was collected from a group of superiors in the hierarchy so that it was possible to compare employees' and managers' perceptions concerning the quantity and quality of communication. The Organisational Verbal Communication Questionnaire designed for managers was completed by the owner of the small company, and by four production-line supervisors in the large company. The number of years they held this position ranged from 6 and 23 in the large company (MD= 15.25) and was 8 years in the smaller company. The number of years they worked in the organisation varied between 10 and 32 in the large company (MD= 24.25), and was 10 years for the respondent in the small company. Their supervisors' ages were 44, 48, 44, 40, and the owner of the small company was 32.

The initial idea of this thesis was to give the questionnaire to the companies' owners in order to gauge their awareness concerning communication with employees. Although this was possible in the small company, where the owner was also the interviewee, this was impossible in the larger company, where the owner was almost invisible. Alternatively there was the suggestion of giving the questionnaires to four supervisors, randomly assigned by the researcher, who did not know them, and chose them by pointing to their names on the computer screen. The number of supervisors

chosen was proportional to the number of employees that were going to answer the questionnaires.

Chapter 5

Results - Verbal Communication

This chapter will deal with the verbal communication results. These results came from two sources, each corresponding to one research hypothesis. The two hypotheses this chapter will be dealing with are:

Hypotheses 1¹⁵ - Verbal communication problems will make employees feel stressed, these levels being different for men and women
and

Hypothesis 3¹⁶ - There are major differences in employees' and employers' perceptions of organisational communication, with employers perceiving communication as being more efficient.

Response Rate

54 (50 female and 4 male) employees worked in the small company and 207 (180 female and 27 male) employees worked in the large company production-lines. 130 questionnaires were initially distributed in both companies - 80 in the large company, and 50 in the small company. 71 (31%) employees in the larger company and 44 (81%) employees in the small company responded. Thus, 115 subjects composed the initial employee sample. 19 questionnaires were excluded because respondents did not answer all of the questions. The final sample comprised of a total of 96 questionnaires. The sample included 80 (44%) females and 16 (59%) males 41 females and 13 males worked in the large company; 39 (78%) females and 3 (75%) males worked in the small industry.

¹⁵ The collected data was organised in a table of raw data shown in Appendix F

¹⁶ Data corresponding to employees vs. employers' perceptions was organised in tables shown in Appendix H

5.1 Verbal Communication and Stress

This section starts by an analysis of the IV- verbal communication and the DV - stress. The levels of stress and communication Means and Standard Deviations were calculated, as well as Pearson's Moment Correlation to see if there was a relationship between both variables, and a t-test was also calculated as a way to access the significance of absolute stress differences between the group who perceived the verbal communication as being good and the group who perceived the verbal communication as being bad.

5.1.1 Means and Standard Deviations

The levels of stress and the communication Means and Standard Deviations were calculated for the entire sample and for both companies were analysed separately, and are shown in tables 4, 5 and 6.

	Men and Women		Women		Men	
	Means	Std. Deviation	Means	S.D.	Means	S.D.
Communication.	42.5370	11.4508	40.30769	12.89951	43.2439	11.03127
Stress	53.3889	16.4654	53.23077	13.80914	53.43902	17.37822

Table 4- Verbal Communication and Stress in the Larger Company- Means and Standard Deviations

	Men and women		Women		Men	
	Means	S.D.	Means	S. D.	Means	S. D.
Communication.	43.42857	9.533363	44	8.873226	35	16.16581
Stress	61.78571	9.925419	61.79487	10.09737	61.66667	9.073772

Table 5 Verbal Communication and Stress in the Small Company- Means and Standard Deviations

	Entire sample		Women		Men	
	Means	S.D.	Means	S. D.	Means	S. D.
Communication.	42.9271	10.6101	43.6375	9.9826	39.3750	13.1142
Stress	57.0625	14.5362	57.5125	14.8196	54.8125	13.2324

Table 6 Verbal Communication and Stress in Both Companies- Means and Standard Deviations

Looking at these tables it is possible to make some preliminary conclusions concerning differences related to the size of the company and gender (this analysis will be provided later in this chapter). These Means show that in the presence of a similar perceived quality of verbal communication, the employees from the small company show higher levels of stress, probably because employees from the small company are being affected by problems in the non-verbal communication. This point will be explored in the next chapter.

5.1.2 Correlation between Verbal Communication and Stress

Pearson's Moment Correlation was also calculated to analyse the relationship between communication and psychological responses to stress. As before, two analyses were performed - a global analysis of both companies, and then a separate analysis, so that differences could be examined. Individual correlation was also calculated to analyse the relationship between each communication category and stress. The results are shown in Figures 1, 2, 3 and 4, and on tables 7, 8 and 9

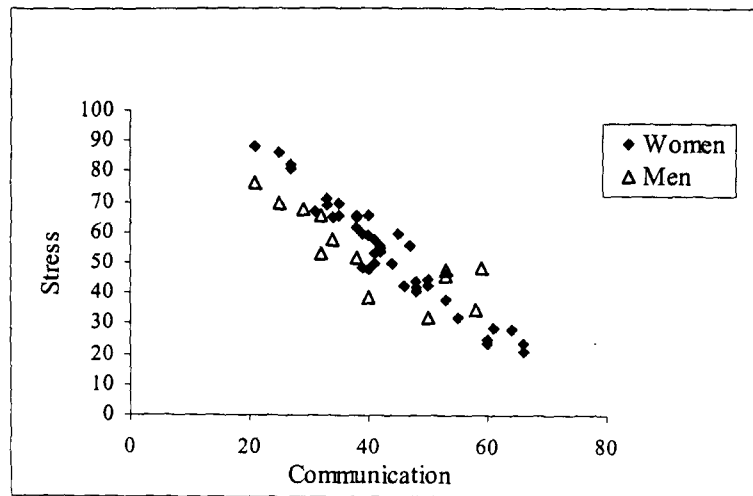


Figure 1- Correlation between Communication and Stress, in the Large Company

Entire sample	C.V.	Women	C.V.	Men	C.V.
-0.91509*	0.443	-0.96022*	0.49	-0.82146*	0.801

Table 7 - Correlation's between Communication and Stress in the Large Company

*P<.001

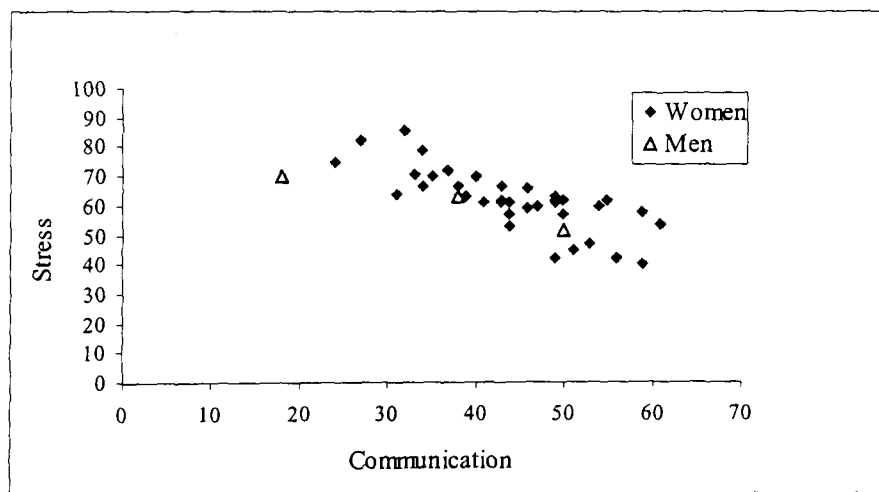


Figure 2- Correlation between Verbal Communication and Stress, in the Small Company

Entire sample	C.V.	Women	C.V.	Men	C.V.
-0.74652*	0.49	-0.76853*	0.554	0.9635**	0.95

Table 8 - Correlation's between Verbal Communication and Stress In the Large Company

* $p < 0.001$

** $p < 0.05$

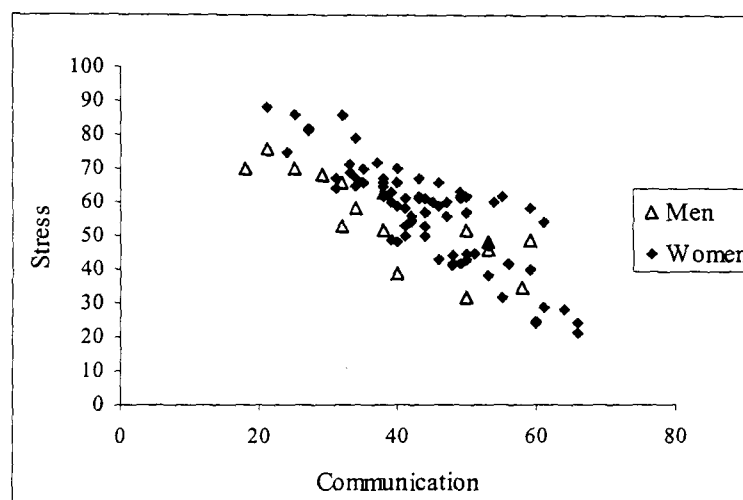


Figure 3- Correlation between Verbal Communication and Stress, in both companies

Entire sample	Women	Men
-0.8097*	-0.84505*	-0.82247*

Table 9 - Correlation between Verbal Communication and Stress in both companies

* $p < 0.01$

It is possible to see from tables 7-9 consistent and very significant negative correlations were found between stress and communication, in both men and women. This means that the higher and the better the verbal communication are, the lower the level of occupational stress felt by the employees. The lower the verbal communication quantity and quality are, the higher the levels of stress felt by the employees.

The calculated t-test confirmed the influence of good communication (scores ≥ 42) and bad communication (scores < 42) on stress. In both companies individually and both companies taken together it was possible to confirm that higher communication scores have a good influence on employees levels of stress, and bad communication scores induce higher levels of stress in employees ($t=-0.7408$, $p<.000$; $t= -5.426$, $p<.000$; $t=-7.382$, $p<.000$)

DC/stress	-0.61195*
FP/stress	-0.69092*
UC/stress	-0.47647*
DP/stress	-0.55476*

Table 10- Correlation between each Verbal Communication category and stress

* $p<.001$

Pearson's Moment Correlation was conducted on the four communication scales, in the entire sample, to analyse the relationship between these scales, i.e. Downward Communication, Feelings Towards Workplace, Upward Communication, and Democracy and Power, and Stress. Significant negative correlations were found in all of the four scales. The higher values of correlation were found for the Feelings Towards Workplace scale, followed by the Downward Communication scale. The following bar graph¹⁷ shows that the scales with higher correlations were also the scales that were

¹⁷ This graph does not represent the averages of these four scales. The Means of these four scales should not be directly compared because each scale has a different maximum. The Downward Communication has a maximum rating value of 30, the scale Feelings Towards Workplace has the maximum of 20, the Upwards Communication of 24, and the Democracy and Power scale maximum is

more highly rated by both men and women. It is possible to perceive that there is a general upward communication problem, with employees giving very low scores in this category. The lower level of correlation of this scale when compared with others, may be the result, not of a lower influence of this category on stress, but because the influence of the other communication categories may be masking the stress results. i.e. when looking to the stress results it is difficult to know which percentage is the result of the influence of each scale.

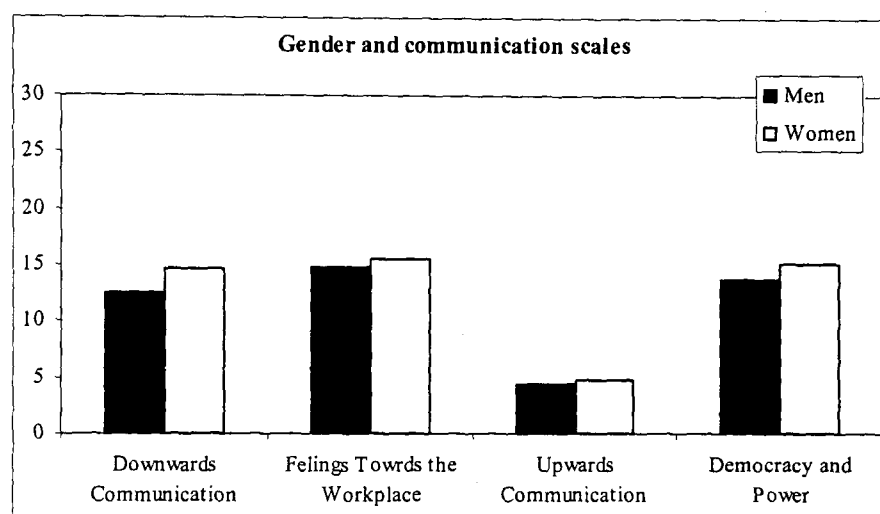


Figure 4 - Converted scale graph- all the categories scales were converted to a maximum value of 30

29. In the bars graph all the values were converted to a scale of 30, so that differences could be perceived.

5.2 Gender, Verbal Communication and Stress

Means and Standard Errors of each communication category were calculated and are shown in the figures 5, 6 and 7 and tables 8, 9 and 10. The ANOVA General Linear model was calculated to analyse the main effect of gender and the interaction effect between gender and the four communication categories. Several t-tests were calculated so that it was possible to access the significance of stress differences between the two groups of men and women.

5.2.1 Gender and verbal communication

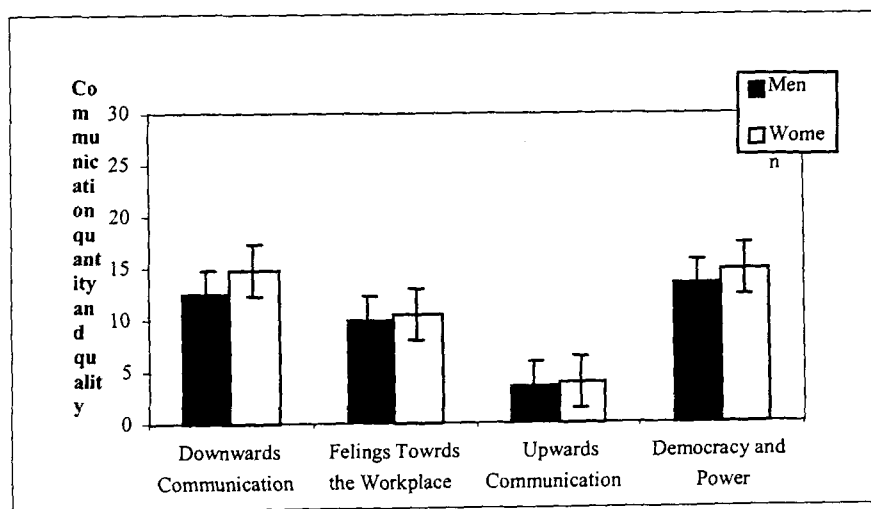


Figure 5 - Verbal communication in the Larger company- Means and Standard Errors

	DC		FTWP		UC		DP	
	Mean	Std. Error	Mean	Std. Error	Mean	Std. Error	Mean	Std. Error
Men	12.76923	1.271754	10.46154	1.124411	3.769231	1.301645	13.30769	0.915568
Women	14.12195	0.591809	11.63415	0.515321	3.463415	0.623814	14.02439	0.559276

Table 11 - Verbal communication in the Large company- Means and Standard Errors

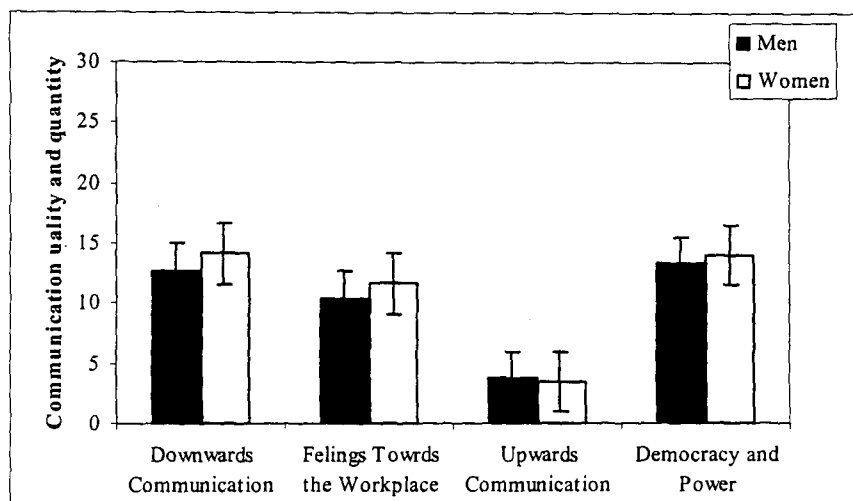


Figure 6 - Verbal Communication in the Small Company- Means and Standard Errors

	DC		FTWP		UC		DP	
	Mean	Std. Error	Mean	Std. Error	Mean	Std. Error	Mean	Std. Error
Women	15.28205	0.588863	9.128205	0.360273	4.282051	0.536079	15.30769	0.527456
Men	11.66667	2.905933	7.666667	4.255715	2.666667	2.185813	14.46154	0.821314

Table 12 - Verbal communication , in the Small Company- Means and Standard Errors

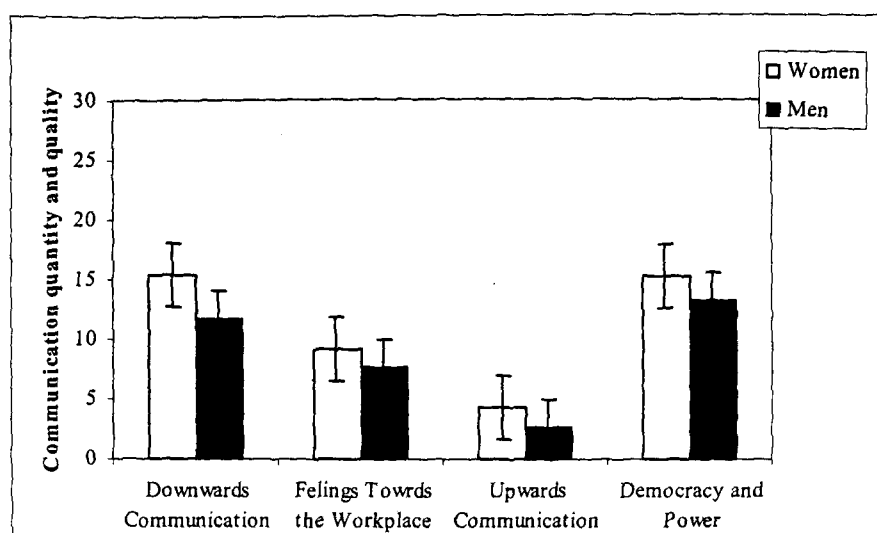


Figure 7- Verbal communication in both companies- Means and Standard Errors

	DC		FTWP		UC		DP	
	Mean	Std. Error	Mean	Std. Error	Mean	Std. Error	Mean	Std. Error
Women	14.6875	0.420064	10.4125	0.345263	3.8625	0.412903	14.65	0.389376
Men	12.5625	1.129044	9.9375	1.163575	3.5625	1.110438	13.3125	0.81506

Table 13- Verbal Communication in both companies- Means and Standard Errors

In table 6, the Means of men and women communication scores give the impression that there is an influence of gender in the way communication (stressor) is perceived. If the whole sample is included (this is more representative) it is possible to see that women gave verbal communication higher scores compared to men. This is also evidenced in men and women's scores in the four communication scores.

However, the idea that men and women perceive communication (stressor) differently is not supported, with the F ratio indicating no significant differences between men and women in the perception of verbal communication, in the large, small, and the two companies taken together ($F(1,53) = 2.169$, $p < 0.145$; $F = 2.375$, $p < .131$; $F = 2.160$, $p < .145$). The ANOVA results also indicate that there is a main effect on communication ratings by each of the categories, i.e. a significant difference in report of

the perceived quality of verbal communication by each category ($F(3, 156)=104.811$, $p<.000$; $F(3, 120)=38.426$, $p<.000$; $F(3, 382)=142.88$, $p<.000$). The fact that both men and women displayed the same type of appraisal concerning the four communication categories is consistent with the F ratio found for the interaction between communication categories and gender ($F(3, 282)=1.119$, $p<.341$). This result indicates that no difference was found in men and women perception of these four communication categories. There is no interaction effect.

This can be seen in the bar graph, where men and women had similar rankings on the four communication scales. The fact that men and women ranked each of the categories similarly is proven by the Anova results.

5.2.2 Gender and Stress

In regard to gender and stress, (table 4 and 5) the Means of the men's and women's scores on stress are similar in both the large and the small company. The fact that men and women are not suffering from different levels of stress was corroborated by the t-tests ($t=-.039$, $p<.969$; $t=-.021$, $p<.983$; $t=-.676$, $p<.501$). This indicates that there are not significant differences in the levels of stress for both men and women. This is consistent with the fact that men and women seem to perceive communication (stressor) in a similar way.

5.3 Employees vs. employers perceptions of verbal communication

Hypothesis 3¹⁸- employees and employers have different perceptions about the quality and quantity of verbal communication, with employers perceiving verbal communication as being more efficient.

To test this hypothesis each questionnaire was carefully analysed. Each employee's answer to every question was considered in detail. Employees' answers to each question were summed up and then percentages of answers to every option, in all questions, were calculated. This allowed the researcher to compare employees' answers, with superiors' answers to the two versions of the same questionnaire. It was exhaustive work, but it allowed a careful analysis of the differences between these two groups verbal communication perceptions. (Appendix H)

5.3.1 Downward Communication

When employers were asked if employees received information about their work, both groups superiors said "yes". However, 40.5% of employees from the small company said they do not receive enough information about their work. In the larger company the superior's perception was more similar to the majority of employees. Only 9.25% believe that they do not receive enough information. Concerning the methods the organisation uses to give employees information about their work, employees and employers have similar perceptions. In the small company the manager mentioned the "*microphone*", "*the notice board*", "*meetings*" and "*one on one communication*". 7.7%

¹⁸ Results were organised in tables in Appendix H

of employees referred "*microphone*"; 40.5% referred to "*notice boards*"; 69% "*meetings*"; and 83.3% mentioned "*one on one communication*". There was no reference to any other method. In the larger company, both superior and employees talked about "*notice boards*" (14.8%), "*meetings*" (24%) and "*one by one communication*" (83.3%). Employees went further and designated "*video magazine*" (1.7%), "*microphone*" (5.5%) and "*letters*" (3.7%.) (table 27 and 28)

Concerning downward communication, the manager from the small company considers that employees receive information on how they are doing at work "*Almost always*", and the interviewee from the large company states that employees receive this type of information "*Often*". However, the majority of employees from the small company considers they receive this kind of information "*Sometimes*" (45.2%), "*Rarely*" (11.9%) or "*Never*" (14.3%). The situation is similar in the larger company, here 33.3% said that they "*Sometimes*" receive this information, 24% said they "*Rarely*" receive this type of information, and 7.4% said they "*Never*" receive information about how they are doing at work (Table 29)

Employees from both companies complain they do not have information about *salary changes*, (S¹⁹-42, 9%, B²⁰-37%); *company policies* (S-38.1%, B-12.96%); *company performance* (S-11.9%, B-14.8%) *management philosophy* (S-19%, B-11.1%), *company plans and out look* (S-26.2%, B-18.51%), *benefits* (S-26.2%, B-31.48%), *organisational goals* (S-23.8%, B-29.6%), *organisational problems* (S-11.9%, B-37.3%). The manager from the small company seems to ignore employees needs for information about salary changes, company policies, management philosophy, and company plans and outlook. In the large company the employer only mentioned company plans and outlook and organisational problems. Employees were considered to have sufficient information about all the other topics (table 30)

Regarding mistakes resulting from having inadequate information, both groups of superiors consider this is not possible. However, 40.5% of employees from the small

¹⁹ S- Small company

²⁰ B- Big company

company, and 46% of employees from the large company say that they had already committed a mistake as a result of inadequate information. (Table 31²¹)

5.3.2 Feelings towards the workplace

The small company manager considers that between 76 and 100% of workers feel "*Almost always*" good about working for that company. However, 59.9% of workers say that only "*Sometimes*" they like to work there. In the large company the employer said that between 51 and 75% of employees feel "*Almost always*" good about working in the organisation, but only 11% of workers gave this answer, 50% said they "*Never*" feel good about working in this organisation. The manager from the small company said that between 26 and 50% of employees feel "*Almost always*" proud about working in the organisation. Only 7% gave this answer. The interviewee from the large company thought that between 76 and 100% of employees felt proud about the organisation. However, only 37% of employees had that opinion. (Table 32 and 35)

Employers recognise reasons why employees feel good about working in the organisation. In the small company the manager mentioned the "*pay on due time*", which was also mentioned by 7 workers. He also mentioned work conditions and extra compensation, but no worker pointed to this as a motive to feel good about working in the organisation. However, (although few workers answered this open question) workers also mentioned the fact that the company was near home (1²²), the fact that by working there they had a job (3), they knew the bosses (1), the type of tasks (3), the salary (3), the contact with other co-workers (14), the time-table (1), the production-line supervisor (2), the task difficulty (3), they had bosses who understand them (3), and the end of year party /1). The superior from the large company referred to the 'to have a job factor' as the only element that makes employees feel good about working there. 9 workers indicated this. Employees also mentioned several other factors, such as;

²¹ All tables mentioned in section 5.3 are placed in the Appendix H

²² Numbers without % that are between breaks correspond to the number of employees that gave that particular answer

collaboration between co-workers (1), type of tasks (3), work environment (6), the contact with other co-workers (8), the fact that the company follows the work laws, the job stability (3), the fact that superiors respect employees (1), and the organisation itself (3). (Table 32)

Neither interviewee mentioned anything concerning those elements that make employees feel bad about working in the organisation. Employees from the small company mentioned: lack of dialogue (5), lack of organisation (6), lack of superiors patience to teach (4), work environment/conflicts (7), lack of support (3), timetable (1), lack of co-workers collaboration (1), noise (3), temperature (3), low salary (1), lack of space (1), differences in employees' treatment (1). The reasons given by employees from the large company were: lack of dialogue between employees and superiors (2), work environments/ conflicts (3), temperature (1), and low salary (1). (Table 34)

Concerning employees knowledge about the organisation, the small company manager considered that employees had information about all the listed aspects. However, only 11.9% knew when the company was founded. 70% did not know the type of clients 70% did not know the company policies, 85% did not have any knowledge about all the company products, and 26% did not even know who the owners were. In the large company the superior said that employees did not know the main clients and the type of clients, but he argued that employees were informed about other aspects. However, 82% did not know when the company was founded, 85% did not know who were the main clients, 80% did not know the company policies, 65% ignored who the owners were. Moreover, only 6% knew the type of clients, and 9.2% knew all the company products. (Table 36))

The small company manager said that between 26 and 50% of employees buy the company products "*Almost always*". However no employee gave this answer, and 62% said they "*Never*" buy the company products. In the larger company the percentage given by the superior was between 0 and 25%. 40.7% of employees said they buy the company products "*Sometimes*" (table 38)

5.3.3 Upward Communication

The manager from the small company, as well as the superior from the large company said that employees talked with them in the previous month. 47% of employees from the small company and 33% of workers from the large company said they did communicate with a superior in the previous month. The majority of employees (16) from the small company and from the larger company (15) (the employees that answered *yes* to the previous question) said they talked between "1 and 3" times with a superior. Both superiors said it was difficult to say what the number of times this happened was. "*Face- to face communication*" was the method referred to by both groups, in both companies.(Tables 39, 40 and 42)

The organisation is "*Sometimes*" concerned about the employees, according to the manger from the small company. It is "*Rarely*" or "*Never*" concerned, according to 57% of employees. The superior from the large company has the opinion that the company "*Often*" cares about what their employees have to say. Only 7% of employees have this opinion, 50% referred that the organisation "*Never*" cares with what they have to say. (Table 43)

5.3.4 Democracy and Power

Both interviewees say employees cannot move freely within the organisation. However, 98% of employees from the small company and 31% of workers from the large company believe he or she can move freely in the company. (Table 44)

98% of workers from the small company and 91% from the larger company say that their work is controlled and the manager from the small company confirms this, but not the owner from the large company. When discussing the way that employees' work is controlled, both referred to the "*pace of work*" and the "*number of pieces*" they

produce. This was referred to by 58 % and 83% of workers from the small company and by 45% and 65% of employees from the large company. Employees also mentioned the fact the organisation controls *the times they go out* (S-27%, B-14%), "*the number of times they go to the toilet*" (S-10%, B- 10%) as well as "*other*" forms of control (S-5%, B-20%). (Tables 45 and 46)

Employees are allowed to take between "1 and 3" breaks according to both managers. This was also the answer given by 92% of employees from the small company and by 94% of workers from the large organisation. The nature of these breaks is also perceived differently, the manager talked about "*coffee*" and "*lunch*". 43 and 88% of employees referred to these. They also mentioned *toilet* (78%), "*telephone*" (5%), "*rest*" (12%) and "*others*" (12%). The superior from the large company said that employees could have breaks for "*coffee*", for "*lunch*", and to go to the "*toilet*". The large majority of workers did not refer to these breaks. There is still a small group of workers that said they could have breaks to "*telephone*" (7%), to "*rest*" (6%, and they also mentioned that there were "*other*" type of breaks they were allowed to take (12%). (Tables 47 and 48)

Both superiors believe that employees challenge a superior whenever they believe the superior is wrong. Only 17% of employees from the small company have the same feeling. 91% of employees from the large company said they never challenged a superior even if s/he was being unfair or was wrong. (Table 49)

Both superiors said that employees have a voice in meetings. However 24% of employees from the small company and 43% of workers from the large company say they do not have a voice in meetings. The small company manager says there is a "60%" centralisation of decision making, but 50% of employees believe there is only 40%. In the large company the superior says there is "20%" of centralisation, while 39% of employees say there is "80%" and 44% of employees say there is "100%" of decision making centralisation. (Table 50 and 51)

Chapter 6

Results -Non- Verbal Communication

The results from the previous chapter concentrated on aspects of the verbal communication process. This chapter will look at non-verbal communication elements, especially those concerned with implicit forms of control and power. The forms of control have changed over the years. As was argued in chapter 2, control is not only the result of subjugation directly imposed on the employees from visible bosses. Organisational communication, power and control can work through various other means. The architecture of the place and the way companies organise their space has an effect. The building construction, as well as the number of windows, the interior division of space, the gardens, and the use of light all confer meanings that reflect the organisation non-verbal communication, they tell something about the way the organisation "thinks". Similarly, the furniture organisation, the temperature, the colours, the architecture design, all affect communication (Altman and Chemers, 1988). The structure of the environment affects who communicate with whom, and what people talk about (Byers, 1996). The panoptic organisation described in Chapter 2 can be characterised by an architecture that restricts the worker to a strictly confined space so that he/she can be controlled. This architecture allows one person to watch over a large number of workers, and the workers do not know when they are being watched (Bentham, 1791, Foucault, 1977). Another factor is surveillance. New technologies are often used to control. Cameras, for example, can be used to guarantee workers safety, but they can also be used as a form of control, to monitor employees work, and this may interfere in the quality of the communication within the organisation. Another point of consideration is the organisation of bodies in space and the restriction of movements (Giddens, 1990, Kirkbride, 1992) and the behavioural cues such as facial expressions and eye contact (Knapp and Hall, 1992).

This chapter will present the results from the observation of the elements mentioned above of non-verbal communication within the organisations. The analysis of non-verbal communication results from the observations made in the two companies. The hypothesis this chapter will be dealing with is:

Hypothesis 2²³ - Non-verbal communication problems will make employees feel stressed, these levels being difference in both men and women

²³ The observation notes were organised in comprehensive tables and were place in Appendix G

6.1 The Organisation's Architecture and Environment

Both organisations had only one building (although of different sizes), with a sad grey appearance. The outside environment was similar in both companies. They were clean, but there were no gardens, which reinforced the organisations' grey image. Both buildings had several windows in the facade, conferring the idea of interaction between the interior and the exterior. In terms of facilities neither building has a canteen. The large company has a small bar, but in both cases the majority of employees take packed lunches with them.

The two environments were analysed inside the organisations - the offices and the production line. In both companies the offices were in the front of the building, profiting from the windows and the natural light. (see figure 8 and 9 - next page)

The small company had glass dividing the offices each containing five or six desks, giving the idea of an open space. These were clean spaces, the ambient temperature was agreeable and the silence allowed concentration. (see figure 8)

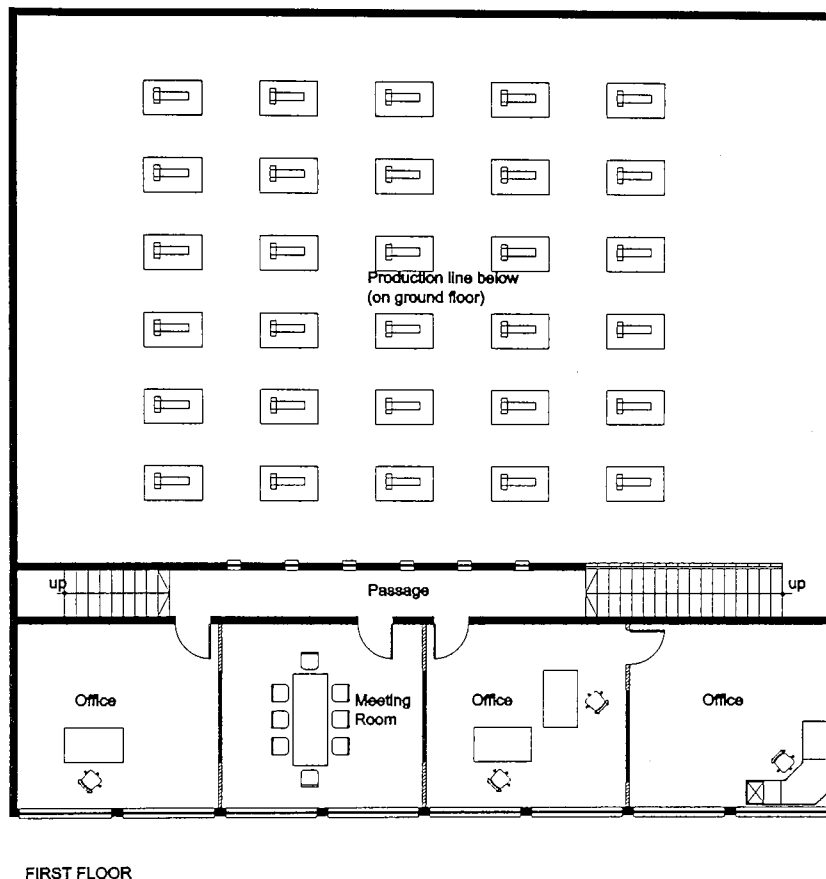


Figure 8- Plan from the small company first floor, where the offices were placed

The larger company had two types of offices. There were small rooms where the head of departments and directors worked, and there were open spaces with several desks where designers and other professionals were working. (see figure 9)

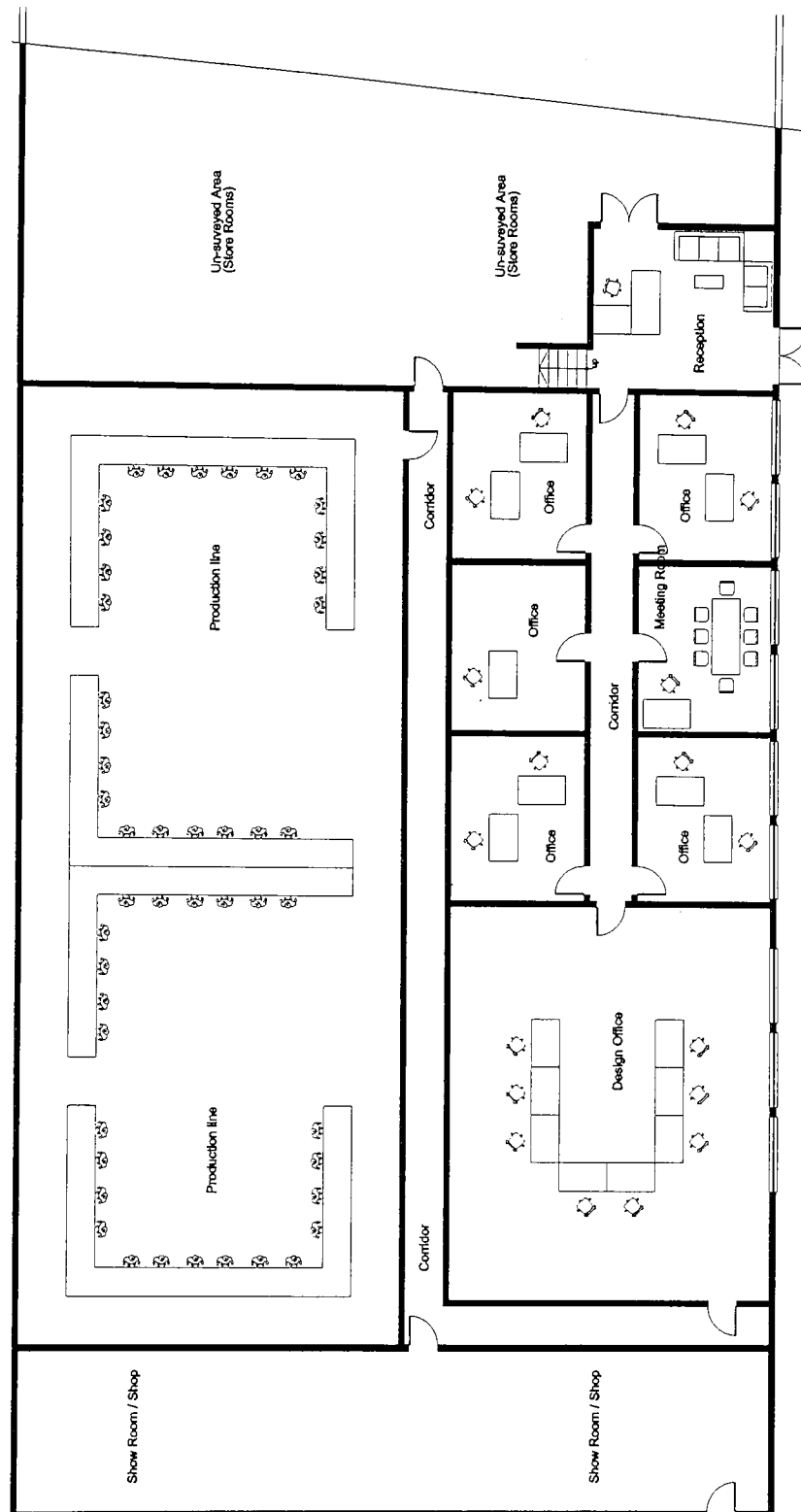


Figure 9- Plan from the large company offices and production line

As well as the offices, the production line was analysed. The distance between the offices and the production line was further in the large company, but the means of access in both companies were the same. There were 3 corridors and 4 doors in the large

company; and there was 1 corridor and 1 door in the small company between the offices and the production line. There were no signs or other indication, and the light was artificial. The researcher went from a place dominated by human relations, natural light, cleanness and silence to a place dominated by machines, artificial light, dirtiness, noise and high temperatures. In both companies the production line was placed in the back of the building, not benefiting from windows or fresh air. Both production lines were open settings where employees worked collectively. (see figures 8, 9, 10 and 11) Field notes were made during the observations and written up at the end of each period of observation.

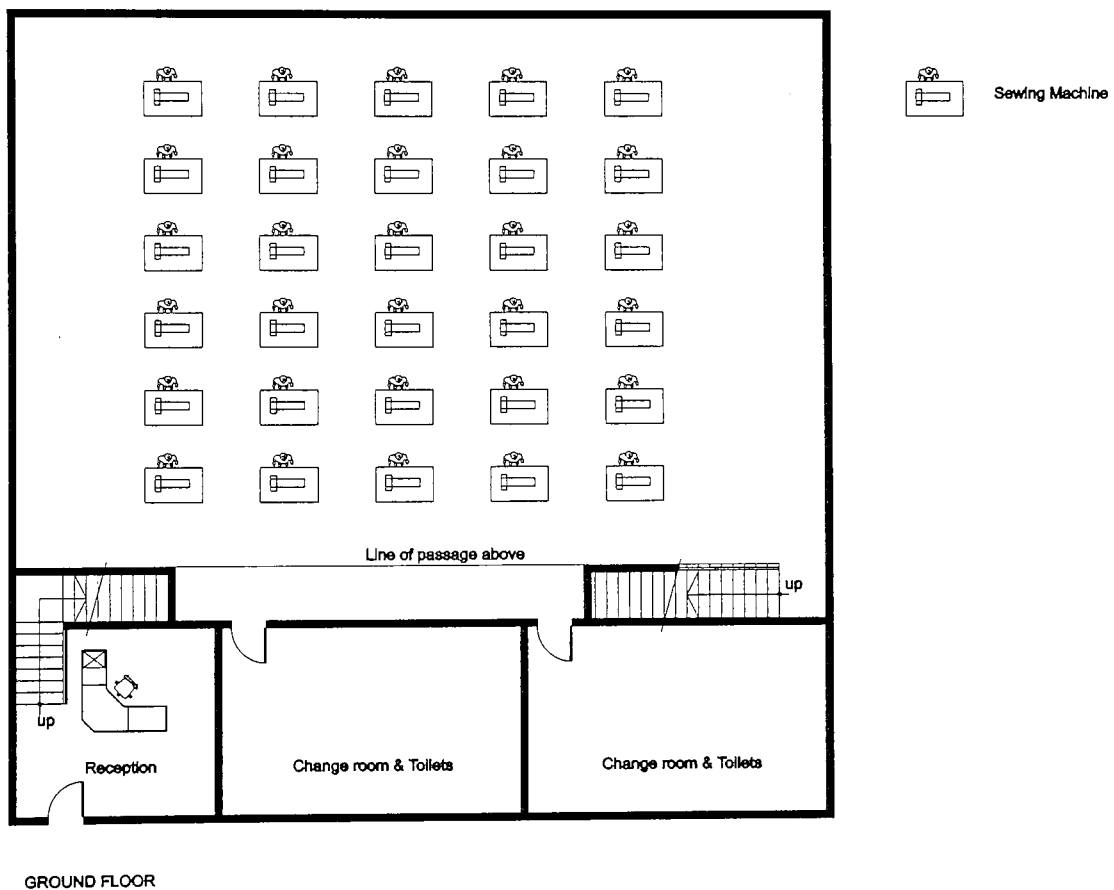


Figure 10- Plan from the small company ground floor, where the production line was placed

6.2 Surveillance and Organisation of Bodies in Space

There were no surveillance cameras in either company's production line. However there were other forms of control - both implicit and explicit. In the small company there was a balcony above the production line. This balcony was to one side of the production line. It was a kind of office extension, having a wall that separated both environments. In this wall there were several small windows that allowed production line observation (see fig. 11). This was particularly convenient to those in higher levels of the hierarchy because they could easily observe, without being observed, and they could not be seen. Employees would only, with some difficulty, know when they were being observed. The surveillance was reinforced by the fact that employees were working in machines that were positioned in a row. The way that employees were organised in space and the consequent restriction of movement allowed the small company management to control employees using a deliberate strategy, but through neutral mechanisms. These employees were distanced about 1.5 and 2 metres apart. As they were placed in rows it was very difficult for them to maintain eye contact or to talk. (see figure 8 and 11)

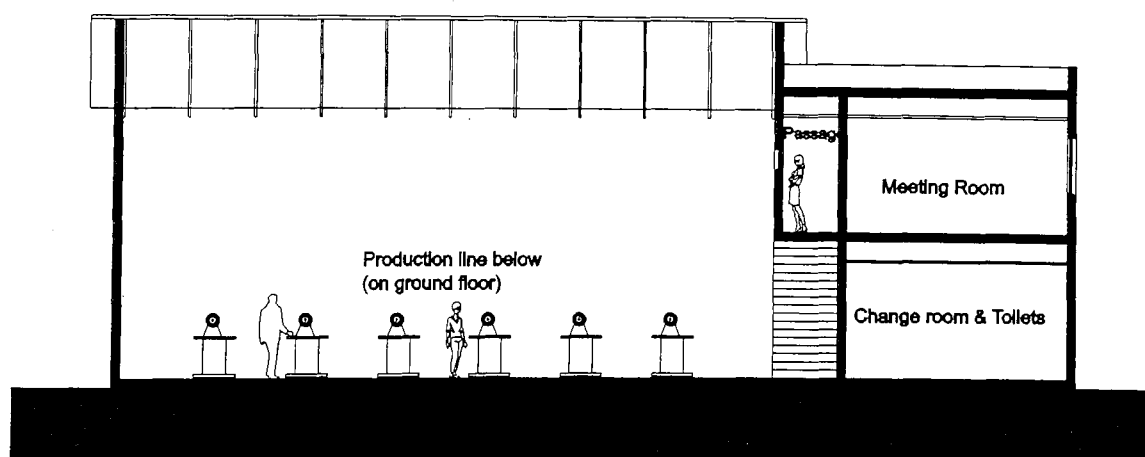


Figure 11- Side plan from the small company

The scenario was different in the larger company. In this company there was no balcony or window around the production line. The offices were more distant from the

production line than in the small company. It was not possible, or at least it was more difficult, for those higher elements of the hierarchy to observe without being observed, and they would have to show themselves if they wanted to observe. Employees could more easily know when they were being observed. Moreover employees were working on machines that were arranged not in a row, but in a U or an L (see figure 9).

This had several advantages. Firstly, the way employees were organised in space did not cause so much movement restriction, and as was previously mentioned, in organisations power can work through the organisation of bodies in space in order to achieve maximum obedience (Kirkbride, 1992). Secondly, employees kept shorter distances between them than if they were in a row. The distance was mostly less than 1 metre, and they could easily touch each other, and the use of touch is seen as being very important in communication (e.g. Jones and Yarbrough, 1985). Thirdly, employees could easily maintain eye contact and talk, without stopping work and without leaving their places. The possibility of maintaining eye contact has been recognised for a long time. It is important as a signal for seeking feedback, initiating interaction or finishing a conversation (e.g. McCroskey et al., 1971).

These differences may explain why employees from the two companies are suffering from different levels of stress, although they have a similar verbal communication quality perception. Employees from the small company suffer from higher levels of stress than employees from the larger company. Employees who work in the large company probably feel more trusted. Trust increases communication and vice versa (Sekhar and Anjaiah, 1995, Gaines, 1980). Due to their position in space the workers from the large company can face each other and talk more easily. They also do not have an invisible “eye” watching them, and so do not feel so controlled. If an employee is not or does not feel trusted it may be because something is wrong with the communication within that company, and stress may be the consequence (This argument will be extended in the next chapter).

The production line workers were not only controlled through their location in space. There were other forms of control, and these were present in both companies. The two companies had supervisors on the production line that controlled employees' work. There was one supervisor for each 8 workers in the small company and one

supervisor to each 12 workers in the larger company. These supervisors were seemingly omniscient. They walked around the production line and employees did not always know when they were present. The employees had their behaviour controlled by supervisors, the number of pieces they produce, and the quality of their production.

6.3 The behavioural cues

On one occasion in both companies an interviewee guided the researcher on a tour. It was possible to observe the employees' behaviour when the superior was near them. In the small company, the manager's presence made the employees look nervous. They did not face the manager when they were talking with him. It was evident there was a superior and a subordinate talking. In the large company employees' behaviour when the superior was present was different. They looked relaxed and faced the superior when they were talking with him. They looked like two friends talking.

Although both superiors looked very friendly when near the production line employees, the superior from the larger company encouraged communication more than the small company manager. Knapp and Hall (1992) used the term "facial primacy" to note the importance that facial expressions and eye contact have on the maintenance of interactions. Moreover, although both seemed relaxed, it was noticed that the manager from the small company did not look employees in the eye. This was not the case in the larger company. As Penteado (1989, p.53) noted "*if we cannot win the employees' trust, how can we win the others respect and trust?*"

These differences may also explain the higher levels of stress felt by employees from the smaller company. This argument will also be extended in chapter 7.

It is possible to conclude that:

First, The two organisations had different forms of control and different types of relationships between employers and employees.

Second, in the small company there were more rigid forms of controlling employees' work and behaviour. The relationships between employers and employees were more distant.

Third, non-verbal communication can explain why the workers from these two companies suffered from different levels of stress (although both companies have similar levels of verbal communication). When non-verbal communication works as a form of control it affects employees' trust in the organisation. When employees do not feel trusted, they do not trust the organisation and communication is negatively affected. This reinforces Sekhar and Aijaijah's (1995) and Gaines' (1980) conclusion that communication and trust are positively correlated.

Fourth, surveillance through the architecture of the place, or the distribution of bodies in space, or the restriction of movements can increase stress. This reinforces the Aiello and Kolb (1996) study, where they reported that electronic monitoring of both performance and behaviour in general threaten privacy increasing stress. This reinforces the idea that 'space talks', and that non-verbal communication is much more than body movements. It confirms Foucault's (1977) idea that there are "Panoptic" organisations - organisations that intend to "normalise" the employee behaviour. Some organisations may not use video cameras simply because they replace it by other forms of surveillance.

Fifth, when organisations develop these forms of control they enhance the lack of communication between employers and employees. According to French (1973, cited in Winnubst, 1984) and Cartwright and Cooper (1997) good relationships between employer and employees are important to avoid employee stress.

Sixth, it was possible to observe some environmental characteristics that have already been identified as stressful. Humphrey (1998) noted the importance of some facilities such as an agreeable room temperature and light to avoid stress.

Seventh, when the relationship between stress and organisational communication is studied it is not enough to analyse verbal communication - this was a gap in the studies of organisational communication. Non-verbal communication can also explain stress.

Chapter 7

Discussion

7.1 Introduction

As argued in Chapter 1 and 2 that there is a lack of theory explaining the relationship between organisational verbal and non-verbal communication and stress. Theorists analysing stress and communication have not developed an interrelated proposition that detects the relationship between both variables. Previous studies have already established the relationship between communication and job satisfaction (e.g. Jablin 1978, Shaw, 1981, Schweiger and Denisi, 1991), and between job satisfaction and stress (e.g. Chen and Spector, 1992). If organisational communication has been found to be related with job satisfaction, and this has been found to correlate with stress, it seemed legitimate to ask what the relationship between organisational communication and occupational stress is, and what the differences between men's and women's levels of occupational stress are.

Results of this study suggest several different conclusions. First, the results show that verbal and non-verbal communication have an important influence on the levels of occupational stress; second, they show that employers' perception of communication differs from employees' perception. The three hypotheses proposed in earlier chapters were, thus, supported by the results from this study.

7.2 Verbal Communication and Stress

Consistent and very significant negative correlation was found between verbal communication and stress in both men and women. The more and the better verbal communication quality was, the lower the level of occupational stress felt by the employees, and conversely, the lower the verbal communication, the higher the levels of stress felt by the employees.

The calculated t-test confirmed the influence of good communication and bad communication on stress. In each company, and both companies together, it was possible to confirm that higher communication scores were related to employees' low levels of stress, and that bad communication induces higher levels of stress in employees.

Significant negative correlations were found between stress and the four communication scales, i.e. Downward Communication, Feelings Towards Workplace, Upward Communication, and Democracy and Power. The higher values of correlation between stress and the communication scales were found in the Feelings Towards Workplace scale, followed by the Downward Communication scale. The results also show that the scales with higher correlations were also the scales that were highly rated by both men and women. The variance analyses also indicate that there is a main effect for communication ratings by each of the categories, i.e. a significant difference in report of the perceived quality of verbal communication by each category. It is possible to perceive that there is a general Upward Communication problem. The lower level of correlation between Upward Communication and Stress, when compared with the correlation between stress and the other three scales, may be the result, not of a lower influence of this category on stress, but because the influence of the other communication categories may be masking the stress results, i.e. when looking at the stress results it is difficult to know what percentage of it is the result of the influence of each scale.

7.2.1 Downward Communication

The study of downward communication showed that the method usually used by superiors to communicate with production line employees in both companies was one-to-one communication, followed by meetings and then by the use of notice boards. The present study did not confirm Neher's (1997) report, in which the author argues that the higher levels of the hierarchies tend to rely heavily on printed and mediated channels for downward communication, because the use of these methods is usually a source of employee dissatisfaction, and it was suggested by McCathrin (1987) that personal and direct communication assumes a very important role, especially with immediate supervisors. The small company tends to rely on this method; this possibly is because companies of this size usually do not have many resources for other methods. More surprisingly the large company, having a larger structure, also uses one to one communication and meetings as their first two options for downward communication. Thus, both companies are giving priority to a method that, as stated in Chapter 2, usually brings about employee satisfaction. Observation of the two companies suggest that this happens because it is seen as a more personal method, giving the employees the impression that the organisation cares for them individually rather than seeing them as a group who can receive the information through a formal and standardised form.

However, the problem starts elsewhere. The downward communication in these two companies is being used more as a form of control than to obtain employee satisfaction, because the information they are providing is above all concerned with production and maintenance. Employees only sometimes receive feedback information about their performance. It was also noted that more information in all of the proposed categories was required, which is information about salary changes, company policies, company performance, management philosophy, company plans and outlook, benefits, organisational goals and organisational problems. The employees of the small company showed a special need for information about salary changes and company policies, and a large number of employees from the large company showed a lack of information regarding salary changes and organisational problems. Thus. there is a general

perception by employees that they receive inadequate communication on a range of issues.

It is important that employees receive information. Employees need to have this information about their performance so that they know if they are doing their job properly, and as a consequence feel less anxiety (Neher, 1997). If there is no feedback employees will be unsure as to where they stand. This lack of information is also reflected in the large percentage of workers, from both companies, who say that they have already made mistakes due to a lack of feedback. The results from this study confirm Neher's (1997) study where it was reported that employees need to have information about their pay and benefits, about how they are being judged, about organisational policies, promotions, job duties, and how technological change affects their job, they also need to know about mistakes and failures of the organisation, so that they can feel less anxiety and can trust the organisation.

Employees need to have information about their jobs, roles, the way they are doing it, and if they are doing what is expected of them, and they also need to know if the organisation cares about them. If this is achieved, if employees feel satisfied in these aspects, then they would like to know if they can do better, and if they can help. If this happens it means that the communication system is working well, and this is the beginning of employees' commitment (Aprix, 1995).

In this study the workers are those who perform the actual production work, and the quality of the products depend on them. Much of the communication that goes on within these two companies is to ensure that employees are informed about policies and procedures. But most of the time even this information is not sufficient. Even if employees had enough information to perform their jobs they might be not motivated, because they feel the lack of other relevant information. Lack of motivation and commitment may affect the quality of work as a result of the workers' state of stress. A good downward communication policy may offer employees new opportunities to initiate connections, reducing the information gap, increasing motivation, and reducing the levels of stress.

Downward communication is also very important to introduce the company to the employees. It can be used to inform employees, especially new ones, about the company philosophy, company structure and history, giving them a positive image of the company (e.g. Canfield, 1991). In the two textile companies that were studied it was possible to conclude that a high percentage of employees from the smaller company know who owns the organisation, however this is not the case with employees from the other company. The majority of workers from the small company do not know when it was founded, and from the larger company who its main clients are. If this group of employees were better informed it might be possible to avoid rumours, their morale would increase, as would their satisfaction (e.g. Daniels et al., 1997, Hellweg, 1997), and it would be possible to decrease the levels of stress and the negative consequences attached.

7.2.2 Feelings Towards the Workplace

“To have a good relationship with employees means to assure their comprehension and respect” (Canfield, 1991, p.89).

An important mirror of the employees perception and image they have from the company, and the quality of communication policies, are their "Feelings Towards the Work place". What makes employees feel bad about working in these organisations differed in the two companies. In the small company employees pointed to factors like work environment/conflict, lack of organisation, lack of dialogue, lack of patience to teach, lack of support, noise, temperature, timetable, lack of co-workers co-operation, low salary, lack of space, differences of treatment. The employees from the larger company pointed to work environments, conflicts, lack of dialogue, salary and temperature.

It is interesting to note that the majority of factors that make these employees feel good about working in the organisations are factors that are not directly related to the organisation itself. The majority of workers from the small company that answered

this question pointed to their co-workers as the main factor. They also pointed to the fact that the organisation pays them on due time (which should be nothing exceptional since it is a right employees have to receive their salary on time). It is also noted that a motive to feel good about the organisation includes factors such as to have a job at all and be near home. Thus the wider economic situation is impacting on the perception of the workplace. Intrinsically it can be noted that the salary, the task difficulty, the timetable, and understanding bosses are factors that make some employees feel good about working in the small company. In the larger company there are also some workers who pointed to the "have a job", the "pay on due time" and "co-workers" factors. The factors intrinsic to the organisation that were identified are the good work environment, the type of tasks, the respect, and the organisation itself. It is important to note that only a small percentage of respondents from both companies completed this section

Another important aspect that might illustrate a low level of loyalty to their employers is the fact that the large majority of workers from the small company never buy company products, and the majority of workers from the large company buys the company products only sometimes. However since the small company produces primarily for export, and because the large company places products in stores which have prices that are not affordable to this economic class, it is not possible to draw a strong conclusion about this. The large company could however provide this group of employees with special discounts so that they could afford these products.

7.2.3 Upward Communication

The analysis of the third communication scale, i.e. Upward communication, revealed that a large number of employees from both companies had not initiated communication with a superior within the previous month (47% of employees from the small company and 33% of employees from the large company); and the majority of those who had done so reported that conversation was about subjects related to work. Maier et al (1961) found that accuracy was much higher when communication was related with job duties than when was related with job problems. This indicates that the

more objective the object of communication is the more likely it is that superiors and subordinates will communicate. When it involves more subjective information and feelings it is less likely to occur.

It seems that no channels and incentives are provided to this group of employees to communicate upward. As a consequence employers do not have feedback about their policies and information about employees feelings and ideas. This lack of initiative to communicate upwards may be the result of what was observed in the fourth scale. Employees are supposed to feel uninhibited in the initiation of the process of communication. If employers establish a communication system that allows and encourages such initiatives, employees can increase their information and emotional connections. In this way, employees can improve their relationships with other employees and with employers.

7.2.4 Democracy and power

Democracy and power is the fourth scale. The majority of employees from the large company consider that the organisation never cares about what employees have to say, and the majority of respondents from the small company consider that the organisation rarely or never cares about what they have to say. Once more, in both companies, and although the majority reported having a voice in meetings, a large number of workers never challenged a supervisor even when they knew something was wrong or unfair. Moreover, there are a large number of employees from the larger company who consider that there is 100% centralisation. Employees in the small company gave the figure as 40%. Employees need opportunities to communicate freely upwards, especially if they can voice dissatisfaction which make employees feel less frustrated and thus less stressed. It seems that in these two companies employees may be suffering retaliations, and as a consequence, never confront a superior even when they think the superior is wrong or is being unfair. It seems that these two companies are dominated by a despotic system that intimidates and forces obedience. These companies are increasing employee dissatisfaction and stress. As Bullock (1983, cited

in Castrogiovanni and Macy. 1990) said, research shows that increasing participation can lead to increased organisational effectiveness and enhanced quality of work and also increases the employees understanding of what is expected of them and creates less task uncertainty.

As it was possible to see, most managers talk more than they listen, and when they do listen it is usually to people close to them, and lower level employees feel that nobody listens to them. Giving employees a "true" voice would have a strong value in organisational culture. It is impossible to accept that employees participate and their opinions are then not used for the final decision. According to Monge and Miller (1995) there are organisations where the opinions of all members are considered in the final negotiated decision. Organisational management usually restricts the kind of subjects that are considered legitimate topics for participation. Although the organisations analysed do not work as real democracies and free speech does not really prevail, giving a voice to employees would be a good way of increasing commitment to the organisation, reducing and avoiding stress.

It is known that employers think that they have reasons not to want to listen to employees. The collection of employee opinions can be time consuming and expensive, or they may say that it is not worthwhile to hear what employees have to say, because they never say what they really think. However, it seems the real reason is that some employers simply do not want to listen their employees. It is important to listen to what employees have to say and there are several methods of doing so. Organisations can use methods that allow employees to express their opinions and doubts anonymously, making it easier for workers to send messages at their convenience, without having to wait for an appointment, or to catch the employer in the corridor. These methods make employees feel less reluctant to talk upwards. Not having to talk with their employers face-to-face makes it easier for employees to say what they want, especially if what they have to say is negative, this way they feel less status difference, and they do not fear evaluations and criticisms as much.

Employers still ask why they would want to receive more information from their employees, especially when this information is negative. Employers who understand the importance of upward communication are likely to have more effective companies, they

prefer to know sooner rather than later what is going on with their employees, they are employers who care about their organisations, who want to solve problems, so that everything can work properly. They know that by giving this chance to employees, they are increasing employees' morale, and reducing stress.

These employers may say that there is no relationship between the amount and quality of information possessed by employees and their levels of stress. However this perspective represents a short-term view. Those employers who have a longer-term view think of increasing employee participation in the organisation's future and destiny. All organisations have a hierarchy of some kind which they need to work efficiently. However it is possible to make this hierarchy almost invisible, to make it so fluid that it is not even obvious which hierarchical level is the superior one. It is possible to decrease bureaucracy and have no clear lines of control. Increasing flexibility makes it possible to create dynamic structures that will more easily adapt to change and organisational members' needs.

Employee participation in decision-making is very important because it makes employees feel part of that organisation, decreasing their resistance to company goals and stress. Participation creates feelings of affiliation and independence, it can lead to higher levels of employee satisfaction in a variety of situations, and individuals will see the organisation and their jobs as more central aspects of their lives. Moreover, participation in decision-making allows employees to know the people and the organisation they work for better, and they will feel more freedom to communicate with different levels of the hierarchy. Also, employees usually have more knowledge about their work than managers do. Thus, if they participate in decisions they will be making an important contribution and it will be much easier for employees to accept, understand and implement the final decisions. Thus it can be concluded that participation allows employees to achieve self-expression, equality, freedom. And the fulfilment of these needs will allow the employees to feel more satisfied and to feel lower levels of stress.

However, despite the evidence that participation creates a knowledgeable and motivated workforce who perform better, there are still doubts about who benefits more from this system, and how should it work (Marshall and Stohl, 1993).

Moreover, almost all workers in both companies reported that their work is controlled, especially over the pace of work and the amount produced. But they also point out that control happens at other levels such as the number of times they go out, or to the toilet. The majority of workers said that they are allowed to have between one and three breaks during a working day, the breaks are for lunch, toilet and coffee. Employees also have to clock in and out, and if they are late back they have salary reductions, or, as was said by a number of employees from the large company, they lose benefits related to meals allowance. The situation of these two companies with regard to control corresponds to Aprix (1995) analysis, which suggests that one of the barriers for effective employees' communication is lack of trust. Employers not only decide what employees need to know, but they also design and structure jobs to reduce initiatives, they centralise decision-making at the top, and they also control employees most of the time through security guards, monitoring cameras, time clocks and the like.

It is difficult to perceive that these managers understand human motivation. Organisations work much better if employees are trusted and given more freedom to participate in decision-making (Hellweg, 1997, Daniels et al, 1997). However a democratic workplace is not only one that allows employees' participation, a democratic organisation is one that cares about their employees, a place where the employee plays an active role in the achievement of individual and of organisational goals.

In general it is possible to assume that those individuals at the top of the hierarchy have more power than individuals in the lowest part. However, this is formal power, one that is "legally" conceived to those individuals in the top, and not informal and "powerful" power. When communication is used effectively formal and informal power can be found together.

7.3 Gender

The Means of male and female communication scores give the impression that there is an influence of gender in the way communication (stressor) is perceived. If the whole sample is considered it is possible to see that women gave verbal communication higher scores when compared to men. However, the idea that men and women perceive communication (stressor) differently is not supported, with the F ratio indicating no significant differences between men and women in the perception of verbal communication, in either company. The fact that both men and women displayed the same type of appraisal in the four communication categories is consistent with the F ratio found for the interaction between communication categories and gender. This result indicates that no difference was found in men's and women's perception of these four communication categories. There is no interaction effect.

The Means of men's and women's scores on stress are similar in both companies. The fact that men and women are not suffering from different levels of stress was corroborated by the t-tests. This indicates that there are not significant differences in the levels of stress for both men and women, and that they perceive communication in a similar way and that they need similar amounts of communication in order not to feel stressed.

However, this study does not replicate those studies that found no differences between men and women, such as the one carried out by DiSalvo et al (1995) who reported that men and women perceive stress quite similarly; or the one carried out by Murphy et al (1994) who reported similar job stress and symptoms for both men and women. Gender may moderate the relationship between organisational communication and stress as is defended by other researchers such as Martocchio and O'Leary (1989), Beens and Poduval (1992) and many others. Although no significant differences were found between men and women in the appraisal of communication (stressor) and in the levels of stress, this may well be because the male sample was very small, especially when compared with the female sample. As states in Chapter 4, it is very difficult to find a company where there are the same or a similar number of men or women working

in the same positions. According to the industry type there are more men or more women. In the case of textile industries the largest number of employees are women, and it would be important to develop more systematic research on this topic using a larger male sample.

7.4 Small Company vs. Large Company

The means of stress and communication show that in the presence of a similar perceived quality of verbal communication, the employees from the small company show higher levels of stress. It is possible that the sample age and level of education has an influence on this result. The sample from the small company is younger and has more education than the sample from the large company. Younger individuals may have a different view of the workplace and better-educated women may experience more dissatisfaction than those with lower levels of literacy. It may well be that the women from the small company, as they have more education, expect more in their professional activities. The less educated workers may be satisfied with whatever they have, thus having less occupational stress. Precisely because the female group from the small organisation is younger and has a higher level of education, they may, more easily than the group of older females, see the place where they work not only as a place with obligations, but also as a place where they have rights, as a place where they are not only supposed to give, but also to receive. Thus they may have higher expectations from the organisation. Thus in the presence of similar of poor quality communication policies this group feels higher levels of stress.

However, several differences were observed in both companies relative to non-verbal communication, and this had more problems in the small company. Thus employees from the small company are probably being more affected by problems of non-verbal communication.

7.5 Non-verbal Communication and Stress

As previously stated, non-verbal communication is much more than body movements, and is more complex than often portrayed. The use of space to convey meaning is an area of non-verbal communication that has not received the attention it deserves (Porter and Roberts, 1991). The conception of space has changed over time because space is not viewed as something that can only be measured or as something objective, and hence the way people experience and understand space has also changed. This has happened not only in art, literature, cinema, and in physics, but also at an organisational level. The architecture of a place, as well as the way as the organisation of furniture and bodies in space, the existence of doors and walls, the number of corridors, doors and windows are some of the non-verbal cues that are often used as a form of exerting control and power over the employees. When organisations define moves, determine people's positions, and create means of supervision, they are creating what Foucault (1977) called "corps dociles", they are automatically creating power. People and organisations are no longer tied to a single space. The essence of modernity is the capacity to create different ideas and concepts of spaces, which are no longer tied to something static and objective. Until very recently space was seen as something taken-for-granted, and was considered to be a domain solely of science of geography. Place disappears in the organisation of space (Friedland and Boden, 1994).

7.5.1 The Organisation's Architecture and Environment

In aspects of the fixed-feature space (using Hall's (1957) terminology) both companies had a single and unattractive building that could immediately be identified as belonging to a factory. There were no gardens, reinforcing the grey atmosphere. The front of the building had several windows conferring the idea of communication between the interior and the exterior of the building.

The offices, in both companies were placed in front of the building, benefiting from the windows and the natural light. A group of four offices divided by glass with five or six desks composed the small company. The large company had small rooms designated for the heads of departments, and open offices where designers and other professionals worked collectively. In both companies this was a quiet, comfortable zone with an agreeable temperature.

The production line was almost the reverse of the offices. It was possible to see great differences between what happened in the offices and what could be observed in the production line. From a quiet place dominated by human relations the researcher went to a noisy and hot place dominated by machines. The production lines were at the back of the building. Both production lines were open settings where employees worked collectively. There was no natural light. The noise was so high that it was almost impossible to hear what the person by our side was saying. The temperature was so high that it seemed that it was in a tropical country, and the cleanliness was acceptable considering the kind of industry analysed. The effects of temperature and lack of natural light create a non-agreeable workplace, transmitting a negative image of the organisation, and giving the impression that the organisation does not care about the employees working in this area.

7.5.2 Surveillance and Organisation of Bodies in Space

There were no surveillance cameras in either companies' production line. This would be considered very important if there were no other forms of control. However there were other forms of control. In the small company there was a balcony on one side of the production line. This balcony divided the area between the offices and the production line, and had a wall with small windows, that could easily work as a form of control. The existence of a balcony, in the small company, allowed the management to obtain information about their employees' performance and behaviour whenever they wanted to, and sometimes employees did not even know they were being observed. As a consequence, employees may feel they have lost their privacy, feel inhibited and be

afraid to communicate upwards, increasing their levels of stress. This is a form of control predicted by the "Panopticon" that confers power and supremacy to those that are watching. According to Aiello and Kolb (1996) monitoring of both performance and behaviour in general may threaten privacy ("Big Brother is watching you"), and it may contribute to occupational stress.

In this organisation the surveillance was reinforced by the fact that employees were working in machines that were disposed in a row, facing the backs of another co-worker, with distances of 1-1.5 meters between them. As Kirkbride (1992) argued bodies can be organised in space in order to achieve maximum obedience. It was difficult for workers to establish eye contact and to talk. Eye contact has been recognised for a long time. It is important as a signal for seeking feedback, initiating interaction or finishing a conversation (e.g. McCroskey et al., 1971). Knapp and Hall (1992) reinforced the importance that facial expressions and eye contact have on the maintenance of interactions using the expression "facial primacy". Moreover, the fact that the group of employees from the small company cannot face and touch each other creates even more communication problems. Jones and Yarbrough (1985) also reported this relationship. It creates difficulties and limits interpersonal communication between employees, who are supposed to be working for several hours only facing their work activity. It is not necessary to be a trained observer to realise that this situation induces stress. The way employees were organised in space and the consequent restriction of movements allowed the small company management to control employees in a deliberate strategy, but through neutral mechanisms.

The scenario was different in the large company. In this company there was no balcony or window around the production line. It was not possible, or at least it was more difficult, for the higher elements of the hierarchy to observe without being observed, and they would have to show themselves if they wanted to observe. Moreover in the large company the production line resembles Ls and Us, the workers being very close to each other, making it easier to talk and to establish eye contact.

These differences probably explain why employees from both companies are suffering from different levels of stress. As referred to in Chapter 5, employees from both companies expressed similar opinions about the quality of verbal communication

in their organisations. However, employees from the small company were suffering from higher levels of stress than employees from the large company. These non-verbal elements can probably explain this difference. Employees from the small company probably feel distrusted. They may also be feeling unhappy because they cannot talk with their co-workers while they are working. They may then feel that the organisation does not care for them and for their well being; and that the organisation only wants them to produce as much as possible. The large company employees do not feel these negative feelings that result from non-verbal communication problems, nor do they feel so observed. As a result they may think that if the organisation trusts them, they can also trust the organisation, and as a consequence they feel more relaxed. Moreover these employees can more easily forget the repetitive work they engaged in. They can talk with the co-worker(s) standing next to him/her about what happened during the weekend, or about the football match they watched on the previous night. These employees can then feel more relaxed and have lower levels of stress.

It is natural that in a place where employees feel observed all the time, and see their communication with their co-workers limited because of their disposition in space, they suffer from increased levels of stress than in a company where, although there are some problems at the non-verbal communication level, the employees do not feel constantly observed, and can more easily communicate with their co-workers.

In both companies, especially the small one, although supervisors were not always present employees were controlled through a variety of ways. They were restricted to a single space with restrictions of movement, they were controlled by timetables and by the fact that they had to clock in and out, their performance was measured, their production was controlled in what concerns quality and quantity, and they also received rewards for their performance, which is an indirect way to measure their performance. Using Edwards' (1982) terminology, employees from these two companies are controlled over simple, technological and bureaucratic control.

The excuse usually given by the higher elements of the hierarchy is that this group of employees have low qualifications and as a result they do not know how to solve exceptional problems, so they cannot be left alone and cannot be trusted

7.5.3 The behavioural cues

Employees' behaviour when the superior was near them also differed in both companies. In the small company, the manager's presence made employees look nervous, not looking at the manager. The manager seemed relaxed, but avoided eye contact and did not encourage communication. It was evident this was a superior-subordinate situation. In the large company employees looked relaxed and looked at the superior when they were talking with him. The manager looked the employees in the eye and encouraged communication. They looked like two friends talking.

These differences may also explain the higher levels of stress felt by employees from the small company. It is easier for an employee to feel calm and not stressed if he or she feels that can talk with a superior as a friend. Looking in someone's eyes shows trust and confidence. Moreover, employees from the large company feel encouraged to talk. This encouragement results not only from eye contact but also from smiles and head movements that were made by the superior.

7.6 Employers vs. employees perceptions of verbal communication

Employers and employees perceptions of quantity and quality of verbal communication varied in the four communication scales that were compared.

7.6.1 Downward Communication

The analysis of downward communication showed that superiors and employees have different perceptions concerning the information received about employee performance. Employers believe that employees receive this type of information more often than what was reported by the employees. In relation to mistakes as a result of having inadequate information, superiors in both companies consider this is not possible. However, a large number of employees from both companies said that they had already committed a mistake as a result of inadequate information.

While the superiors from both companies considered that employees received information about their work, a large number of employees said they did not. Moreover, in the small company, the owner considered that employees did not have information about benefits, organisational goals, and organisational problems, and the superiors from the large company considered that there was an information gap only in relation to benefits and organisational problems. On the contrary, employees reported needing information at all levels.

As far as employees' knowledge about the organisation is concerned, the small company manager felt that employees have information about all listed aspects. However, only a small percentage knew when the company was founded, knew the type of clients and the company policies, had any knowledge about all the company products. In the large company the superior said that employees did not know the main

clients and the type of clients, but he argued that employees were informed about the other aspects. In fact, a large percentage of employees did not know when the company was founded, did not know who were the main clients, did not know the company policies, were ignorant of who the owners were. Only a small percentage knew the type of clients and knew all company products.

The tendency for the existence of different employer-employees perceptions about communication initiation was noted in Weber's (1970) study with pairs of superiors and subordinates. He reported that superiors always believe that they initiate the communication more than the other person in the pair does. He also noted that this tendency was much greater in downward than in upward communication. In other words employers and employees vary a lot in their perception of communication between each other, with superiors perceiving the amount to be much greater

7.6.2 Feelings towards the workplace

Looking to the second scale - Feelings Towards the Workplace - there are also a number of differences. It is possible to see that managers are not sensitive to the factors that make employees feel good or bad about the organisation. Moreover, the small company owner and the superiors from the large company have inaccurate perceptions about the percentage of workers that feel proud about working in the organisation. The employer from the small company also has a wrong perception concerning the number of employees that buy the company products. The numbers reported by the superiors from the large company were more accurate, but there is still some lack of information about their employees' loyalty to their products (or it may be that superiors forget how expensive these products are for employees).

7.6.3 Upward Communication

Both managers reported that employees had talked with them in the previous month. A large group of employees from the small company and a smaller group of workers from the large company said they did communicate with a superior in the previous month. Employees talked between "1 and 3" times with a superior. Both superiors said it was difficult to mention the number of times this happened. "*Face-to-face communication*" was the method referred to by both groups, in both companies.

Both employers and employees seem not to agree on what concerns organisational interest in what employees have to say. Employers believe the organisation cares more about what employees have to say than do the employees. A large number of employees said that the organisation do not listen to what they have to say, and that the superiors do not pay attention to their ideas or problems. It seems that upward communication may be inadequate in these organisations. This may result from the fact that the superiors may tend to have an optimistic perspective about the upward communication that is practised in their organisation. At least this perspective may be more optimistic than the one presented by employees and, as a consequence, they initiate less communication with their superiors than the other way around. Moreover, in this situation subordinates are more reluctant to send negative messages up the chain of command, because they fear that they can lose their job, or that a promotion will never come if they send negative criticisms. As a result upward communication is distorted or incomplete.

It seems that superiors are not placing enough importance on the communication employees want to send thereby creating conditions that discourage upward communication. As Daniels *et al* (1997) noted some organisations do not encourage this kind of communication. It seems that employees take their communication with superiors more seriously, than the other way around. As a consequence, superiors are not well informed regarding feelings and problems felt by employees from this level.

7.6.4 Democracy and Power

In relation to the Democracy and Power scale it is possible to notice the same tendency in employer and employee perceptions. A large number of employees from the small company reported that they can freely move inside the organisation, but the manager says they cannot. In the large company the same rule exists for employees' movements, however there are still a large number of employees who think otherwise. In the small company both agree about the existence of control. However, this does not happen in the large company where the large majority of workers say they are controlled, and their superior says they are not, although two forms of control were identified. There is also some disagreement about these forms. Employers only talk about the control of the pace of work and the output, but employees also talk about control in relation to the number of times they go out, to the toilet, etc. They agree about the number and nature of the breaks. However, this agreement is limited. While the majority of employees reported that they do not challenge a superior even when they know the superior is wrong, the superiors consider that this happens. Both superiors said that employees have a voice in meetings. However there are employees in both companies who say they do not have a voice in meetings. They also tend to see decentralisation with different eyes, with employees pointing to higher levels of centralisation when compared with their superiors.

It seems that managers tend to have an optimistic perspective about their communication with employees from this level of the hierarchy. It is possible that those responsible for communication with employees may sometimes have some difficulty deciding what kind of information this group needs most, and they may make the wrong choice. Managers and those responsible for the communication policies may think they are sending enough and the right information. However, this would not happen if they cared more about listening to their employees.

7.7 Last considerations

The sources of occupational stress that have been identified by other researchers, such as work overload, role conflict, unmet expectations and interpersonal conflict among members, role ambiguity, job scope, role pressure, high responsibility for others, environmental conditions and other factors. These have been identified in Chapter 1 and can be a result of communication deficits and problems. After establishing the relationship between communication and stress it is possible to argue that at least some of the stressors referred to in Chapter 1 can probably be ameliorated if a good communication policy is established. If there is a quality communication policy it is possible to discuss questions related to timetables, lack of organisation, work overload, role conflict, role ambiguity. Moreover, employees can have feedback about their performance and information about their work and their organisation; they make fewer mistakes, feel comfortable in talking with superiors even when they are wrong, and to talk with superiors about environment problems such as high temperatures and noise. There would be more distribution of power and employees would feel more co-operative, they would more easily identify themselves with the organisation, and feel more control over the finished product. Maybe jobs would not be more secure but at least employees would not feel so insecure because they would have the information about the safety of their position, and would know exactly when to start looking for another job. They would have the opportunity to use their creativity and their talents because the organisation would listen to what they have to say.

Some managers are only vaguely aware of the importance of communication, and how it can make a tremendous difference to the way employees receive their policies and decisions, and the way communication affects stress. Managers and researchers can try to improve work conditions, increasing wages and giving bonuses, but should not think that these measures can solve all the employees' problems. Managers need to ask employees what their real problems are, what is worrying employees, and what they could do to improve the employees' situation. Employers need to see employees not simply as a group but as single individuals with their single

problems, families and necessities, who together comprise this group. Lack of communication is an important variable affecting organisational tensions and consequently stress. When simple rules of good organisational communication are not followed (such as to communicating good and bad news; recognising management errors and making employees feel free to offer constructive criticisms) stress is the consequence. Understanding and using these and other communication principles can be a powerful tool with which to handle human relationships with effectiveness and sensitivity. It is important that communication networks are well established in organisations to avoid having sound without music, to avoid a 'tower of Babel', where no one understands anyone else

With ever-increasing pressure and lack of time to communicate, employees need tools to help reduce strain and maximise their potential. An appropriate communication policy may help both. Helping employers to learn about and understand the importance of communication may be a place to start. It has been shown repeatedly that when people are stressed their capabilities are reduced and they become emotional rather than rational beings. This makes people operate on a limited bandwidth; they start to use just a few of the available channels because they have not the energy nor the psychological power to use all channels (Cryer, 1996).

Stress causes anxiety (e.g. Hurrell, 1985), depression (e.g. Fusilier et al, 1987), irritation (e.g. Javaratne and Chess, 1984), mental and emotional disorders, sleep disturbances, fainting and headaches (e.g. Gronkvist and Lagerlof, 1997), high rates of absenteeism and staff turnover (e.g. Parker and DeCotiis, 1983), poor industrial relations, high accident rates, antagonism and low job satisfaction (Chen and Spector, 1992). In these "wasted" working hours both employee and employer lose, and a chain reaction is the consequence, bringing more frustrations and problems to both. Like human beings, organisations dominated by stress breed insecurity and inhibit creativity, harmony and productivity. No-one can be happy in a stressed organisation as is indicated by high turnover and organisational negative outcomes. A good communication policy can help people feel cared for, valued and appreciated.

Communication has to be seen as a process, something that has to be managed alongside other things in organisations. Employers may be regarded as the

organisation's primary communicator although often this is not understood. In some case manager are unprepared for this role, since their role as communicators has often been regarded as something peripheral rather than central. Production and distribution are never disregarded, never left to chance, so why is communication? Communication also needs to be carefully looked at, prepared and planned for. Those responsible for the process of communication have to choose what information is significant and should be attended to. The organisation that knows how to make efficient use of information is what Choo (1998) called, a "knowing organisation". He argues that organisations have to use information to make sense of the outside world and to make the inside world possible and well understood to those who work there. The organisation has the role of interpreting the information coming from the outside, to construct a shared understanding. Thus, organisations are open systems that need information as much as they need other raw materials, and they need to use and treat that information in a way that satisfies employees' needs, so that they can inform and update their members.

There are good reasons why organisations should support their employees by attending closely to more of their human needs. Employees should be valued not as a means to an end, but as an end in themselves. Employers should allow employees to act out their own part of the organisational vision. Superiors must make sure that employee x or y can perform the task, otherwise the result can be increased stress. Empowered and informed employees are more motivated than the non-empowered and uninformed ones, because they know they are performing a valuable role in the organisation. This increases employees' satisfaction and commitment thus decreasing their levels of stress. Managers have to be sensitive to the different forms of control and the consequences these have for the workers. Managers cannot argue that control is a result of the work design itself (production-line employees working with machines that control the quantity and quality of work) and consequently that nothing can be done. They cannot say that employees need to be controlled as a result of their lower qualifications and/or experience, i.e. due to their low qualifications and their routine work these employees do not know how to solve some problems.

The organisation needs to share information with employees located at different places in the organisation so that their mental maps of the organisation become more elaborate and identification becomes much easier (Roul and Kiesler, 1995). When

employees from this level have access to information and are given the opportunity to share information and knowledge the organisation will be the one to benefit. A non-stressed organisation is one in which all employees participate in the information life of the organisation, independently of their hierarchy, gender, age or ethnicity.

The organisation that best attends to its employees keeps them longest and gets the most from them. This means attending to their needs not only for basic survival, but also higher needs of participation, information and meaning, which are all included in needs for communication. Organisational members, as people that often live in the same community, can identify themselves as a group and share the organisation principles and ends if the communication strategy is well-defined and efficient. Workers usually have a strong relationship with the unit where they work, but their relationship with the larger organisation is often weak, unless the employees can come to be thought of and think of themselves as members of the larger organisation (Roul and Kiesler, 1995). Employees need incentives so that they can feel more like organisational members, more humanely treated, thereby reducing the levels of anxiety, conflict and, consequently, the levels of stress. Positive change starts with the recognition that something is wrong and of the need for change. Non-stressed organisations are not an accident, are not something that just happen without the right measures and without attention. Organisations need to manage employees' stress by recognising that employees are the most effective source of success. An organisation where employers and employees share information in a dynamic and flexible way, where employees can offer something to the organisation and can also gain something from it, is an organisation where employees are not alienated.

Marx (1970) argues that alienation is an unavoidable state in which all workers find themselves. Work is not seen as being a source of satisfaction, it is only the way through which employees get money to satisfy their needs outside the working hours. Moreover, workers have to follow their employers' instructions and do not have contact with the final product. According to Marx this situation makes employees feel separated from themselves - they feel alienated. They do not belong to that place because it just a source of money, and the place, the product do not belong to them. Employees are just an instrument that allows the organisation to exist. The worker feels unhappy, he or she just feels himself or herself when he or she is outside work. Thus at work people are

completely alienated. When this happens employees have the feeling that they belong not to themselves but to other individuals. When someone feels like a prisoner, it is not only the body that stays in this prison, the mind also stays. The worker loses creativity, potential, and capacity to contribute to the development of the organisation. In this case, both employers and employees lose, both become strangers and the organisation cannot work effectively anymore. For Marx, alienation was a condition that all employees working under capitalism would suffer so, for him, it would matter little if employees say they feel alienated or not, since the structures of capitalism would determine this state in all workers. Thereafter, people who say they are satisfied at work would be expressing a "false consciousness".

However capitalism should not be seen so darkly as Marx viewed it. Or should it? Maybe some employees develop ways to combat alienation and ways to give meanings to their jobs. But do employers know that if they want to direct employees so that they can achieve the production targets, they need employees' co-operation and presence of body and mind? Do they still believe that they have to control and supervise employees, and that they do not need to provide them some freedom?

Should we believe that all the modern emotional responses are what Mestrovic (1997) called "post-emotional"? And even if they are, can anything be done? Employees cannot accept organisations that give standard answers to their problems because organisations may have changed with the advent of post-modernity. However, human emotions remain the same and individuals are far from getting used to having their emotions manipulated, as argued by Mestrovic. Employees can have their work controlled (even if they do not like it) but will never have their emotions totally controlled.

Many managers persist in the belief that the workplace is a place where satisfaction, fulfilment and co-operation exist without boredom, frustration, anxiety and, importantly, stress. There are several ways of analysing work, in the same way that there are also several work realities. It is not the intention here to say that everything that happens inside an organisation is bad and that all managers are autocratic. However, it is important to recognise that at the beginning of the 21st century things could be better in the way organisations treat their employees. Large numbers of

problems could be reduced if a qualitative communication policy, with an emphasis on recognising stress levels, was recognised. As indicated above, these are the cause of negative consequences for both the organisation and the individual that works there.

A problem with many employers is precisely that they see stress in an authoritarian way, reflecting McGregor's Theory X. According to this theory many employers believe that employees dislike work, that they do not have ambition, they are passive, avoid change, are self-centred and do not worry about the organisational needs (White, 1997). Thus, the prevailing ideology suggests that stress does not exist within the organisational milieu. Rather, what exists is a group of workers who do not want to work. Employers who share this perspective have excessive and unrealistic role expectations and give their employees impulsive and, frequently, contradictory task assignments. Other employers see the phenomenon of stress as emerging from unrealistic ideas, beliefs and expectations that are held by workers about themselves, their work, and the organisation where they work, ignoring the emotional vulnerability and workers' incapacity to adapt. This approach also tends to ignore the environmental factors that are causing stress. Furthermore, some employers identify stress as the result of the poor health of the employee or of the employee's incapacity to manage stressful situations or, again, as a result of the difference between the skills the individual has and the skills needed to undertake the job. This shows that some organisations have problems admitting that, actually, they may be the source of workers' stress.

Many organisations try to make their employees believe that stress lies with them and their reactions rather than in the characteristics of the job, the organisation environment and its facilities. Certainly, some stress is internally generated, a function of individual personality, beliefs and values, or is the immediate consequence of a person's behaviour (e.g. Abush and Burkhead, 1984, Orpen, 1982, Kahn and Byosier, 1990). This view tends to blame the victim. Responsibility for stress is a more complex matter and organisations are often the cause of it. It is not always easy to identify the causes of organisational stress. However, it is a significant issue and an increasing problem. With the increasing competitiveness and organisational change the situation tends to get worse. Organisations will not only need more and more human resource professionals such as stress counsellors, but there is a need to start treating employees

differently, paying them more attention and valuing things such as communication – those factors that can enhance workers' psychological well-being.

Technological changes and advances have, over two centuries, forced human beings to work in organisations dominated by machines and large numbers of other individuals. In many ways, employees feel like a grain of sand in the middle of a desert, feeling anonymous and isolated. Workers have frequently to perform their tasks in complete isolation, not being able or allowed to contact other workers during the working period. Sometimes it is because co-workers are too far away, sometimes the production-line machines work so fast that they have to keep their eyes and all their senses on what they are doing to prevent an accident, sometimes there is an established goal for each worker and they have to work fast if they do not want to lose their jobs, and sometimes employers condemn conversation during working time. In any of these situations, the organisation is contradicting the genetic need for communication and is transforming employees into living machines. The monotony of mass production in production lines could be reduced if employees could talk, if they had more breaks and where they could have the opportunity to socialise with co-workers.

Chapter 8

Conclusions and the Model

8.1 Conclusions and the Model

A consistent and very significant negative correlation was found between verbal communication and stress, in both the men and women who featured in this study. The influence of communication on stress was confirmed by the t-test. This means that the better the quality of verbal communication the lower the levels of stress were, and *vice versa*. The quality of verbal communication was similar in both companies. The levels of stress were not. There were differences in the quality of non-verbal communication, with the small company showing more forms of control. It is possible to conclude that the differences in the levels of stress, in both companies, may be the result of these non-verbal communication cues.

This study also shows that there are differences in the way employers and employees perceive the quantity and quality of verbal communication. Employers have the tendency to report higher amounts of communication, reporting more frequency of downward communication compared to that of employees. They are not in agreement about the content of the information sent and received.

The results were not conclusive concerning differences between male and female perceptions of communication (stressor) and the levels of stress, possibly because of the limitations of size of the male sample.

In establishing the relationship between communication and occupational stress, this thesis also proposes that the sources of occupational stress that have been identified by other researchers, such as work overload, role conflict, unmet expectations, interpersonal conflict among members, role ambiguity, job scope, role pressure, high responsibility for others, environmental conditions and other factors that have been identified in Chapter 1, can be a result of communication deficits and problems.

These relationships can be traced in the following model:

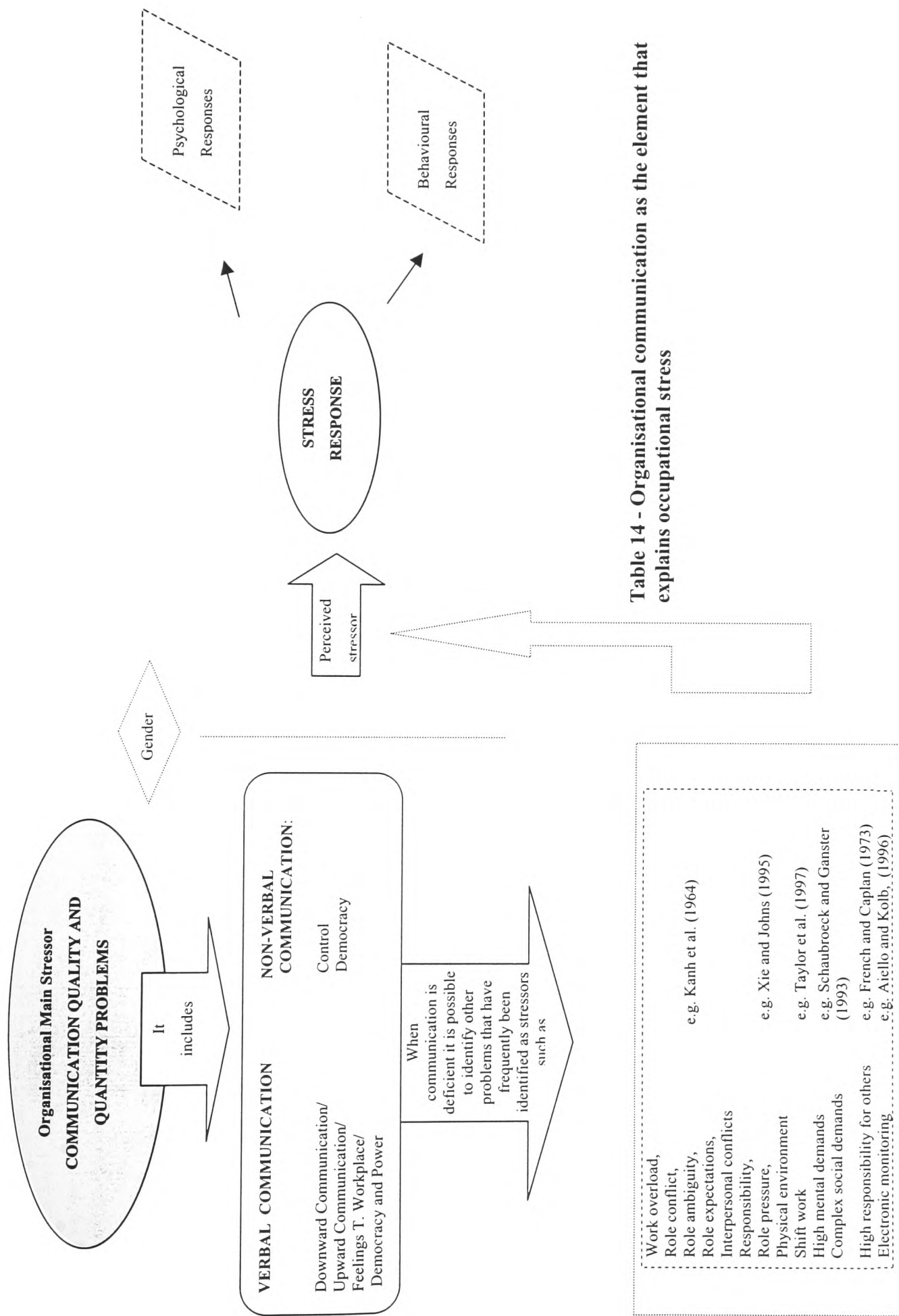


Table 14 - Organisational communication as the element that explains occupational stress

8. 2 Measures to reduce stress in these organisations

Various measures could be used by these organisations in order for their employees to experience less stress. Using measures such as relaxation techniques or cognitive coping skills (e.g. time management courses or assertiveness training) serve to limit the damage and the consequences, but they do not eliminate the sources of stress (Cooper and Cartwright, 1994). Thus, organisations need to develop preventative measures such as developing an appropriate communication policy to avoid having their members feeling over-stressed.

As far as downward communication is concerned, it is important that:

Firstly, these organisations continue using the face-to-face method, especially when information is related to more personal subjects or when the information is relevant only to a particular group of employees. This method brings employee satisfaction because of the feeling that the organisation cares about both individually and as a group. Receiving information directly through superiors allows personal contact, provides knowledge of superiors and gives the impression that the organisation cares and wants to know.

Secondly, based on the empirical material in this study employers need to give employees more information about salary changes, company policies, company performance, management philosophy, company plans and outlook, benefits, organisational goals and problems. Employees need to be informed in order to feel more relaxed. Once informed then they may feel they have more control over the situation and, consequently, feel less stressed. If employees are more informed they know where they stand and make fewer mistakes. Both employees and employers benefit from this situation. These topics are of interest to all employees. In order to achieve this objective, organisations can use internal magazines, annual reports, general memos, letters, information handouts, videotapes and films. These downward communication methods allow

managers to give information to a large number of employees. Consequently, employers cannot give the excuse that it is impossible to inform all members.

Thirdly, it is crucial for organisations to have some kind of induction programme for new employees. If this is done these organisations could avoid having employees who do not know when the company started, what the type of company products are or who owns the company. Providing employees with this information allows the development of a positive organisational image. Moreover, individuals talk about what they know. If this type of information is provided then employees can more easily talk about the organisation and can project the organisational image externally. Having well-informed employees can also reduce the dissemination of rumours. The company can be introduced to employees through a variety of methods such as internal magazines, employees' meetings or training sessions.

Fourthly, another factor helping increasing employee loyalty relate to employee access to company products. Both companies in this study could have created incentives and opportunities so that employees could have had greater access to their products.

Upward communication needs special attention. A small number of employees said they had talked with a superior during the previous. Those who had talked with a superior had done it a limited number of times and topic was work-related. One explanation for this is that there were few channels or incentives provided to communicate upward. In this sense, it may be that employees feel inhibited to communicate upwards.

These organisations need:

Firstly, to present employees with alternatives. They may, for example, use suggestion boxes, opinion surveys and collective employee meetings. These methods allow employees to feel less reluctant to communicate upwards and may actually encourage them so to do. If they do not have to face their employers, they may have fewer difficulties in expressing their opinions,

especially if what they have to say is negative. During meetings they may feel freer to talk because they feel more protected by co-workers than if they were meeting a superior alone. Employees who can freely voice their dissatisfaction feel less stressed even where, for them, there are unsatisfactory conditions. Suggestion boxes have to be opened and the opinion surveys analysed, and the results and solutions need to be shared with employees so that they feel that their opinions are being considered and respected. If they feel that boxes are never opened or surveys never analysed, employees will continue feeling that they are not listened to.

Secondly it is important to note, that when asked about what makes employees feel good about working in these organisations, employees had different responses. Factors intrinsic to the organisation are only identified if employers listen to employees' complaints, and do care about their well-being and feelings. As suggested above, employers should not only listen to employees, they should also initiate measures for action. If upward communication is working properly, managers can also have feedback about their policies and know how employees are reacting to them.

As far as non-verbal communication is concerned, it is important that:

First, these organisations care about the production line environment. Natural light, comfortable temperatures and less noise would help employees feel more content.

Second, it is important that organisations do not have "panoptic" forms of control in their production lines. The way companies physically distribute employees in is another example. Arranging employees in rows where they cannot face each other and cannot talk is not good for employees' well-being. In a place where employees feel their communication with co-workers is limited as a result of their disposition in space, and where they know they can be observed at any time, employees feel higher levels of stress than in an organisation where surveillance is less and where employees can communicate with their co-workers. Employers should not forget that space and the environment structure communicate also. Non-verbal communication has to be considered as important as verbal communication.

As a result of international changes in the world of organisations the task of communication has become more critical. There was a time when managers could communicate according to their own foibles. Some managers are still doing this. However, managers need to understand that things can be done differently and that employees' communication must become a higher management priority than previously.

Of course there is no such thing as a perfect organisation. However, if employees and those responsible for the communication policies were to pay more attention to the elements referred to above it would be possible to have organisations where employees feel less stress or even no stress at all. Managers need to be more concerned about occupational stress if they want to improve their production, and consequently their profits. Organisational costs such as high absenteeism, turnover, high accident rates, antagonism and low job satisfaction could be reduced. All the evidence produce in this thesis suggests that organisations whose workers suffer from stress experience increased sick days, higher worker compensation claims and higher injuries

and accidents at work. Stress has a greater cost to the organisations than its prevention (Kompier and Levi, 1996).

This study allows organisational psychologists and those responsible for organisational processes of communication:

1. To understand better the communication processes within organisations and the way these affect occupational stress in both men and women, and in designing an appropriate communication policy;
2. To employ the questionnaires in different types of industries;
3. To use the non- verbal communication checklist.

This study is also important in yielding insight into the use of communication in order to decrease levels of stress and to enhance job satisfaction. If decreasing levels of stress and enhancing job satisfaction are organisational goals, an understanding how verbal and non-verbal communication influence occupational stress in both men and women would help in designing communication strategies to achieve those goals.

8.3 Weaknesses and Further work

Additional work might be undertaken to improve the range of applicability of the proposed model.

First, in further studies it would be important to use a larger male sample, similar in number to the female sample, so more representative data could be provided a more conclusive relationship could be drawn between gender, communication and stress. In this study the male sample was not larger because of the domination of women in the type of industry studied.

Second, it would be useful to incorporate other methods in the collection of data, so as to test communication policies and then measure the stress results after a certain period. This experimental method would thus consist of a longitudinal study over several years, so that different methods and their consequences are tested after a certain period of time. A longitudinal study has advantages because it allows researchers to analyse differences across time, determining the influence of specific events and of specific communication methods and policies. Using a field experiment, it is possible to introduce communication policy changes in only part of the group of employees studied and to keep the rest as a control group. This increases the researcher's perception of the importance and influence of certain methods. This was not possible in this study because the researcher was not allowed to interfere in the organisation's normal functioning. Moreover, the observation and questionnaire methods have several advantages, which have already been listed in Chapter 4.

Third, in further work it would be interesting to analyse the relationship between organisational communication and occupational stress within other organisational groups. As concluded here, the study of the relationship between communication and stress is a relatively new line of inquiry. There are a number of avenues that have not been explored and which are beyond the scope of this study. Research may focus on the managerial group and analyse how

communication affects their levels of stress and if communication problems have similar effects on this group. Comparison of different departments in the same organisation could be made to see if the quality of communication is the same, and what the levels of stress felt by these different groups are. Different hierarchical levels could be compared to see if organisation members from different levels have differing perceptions of communication and how the same levels of communication affect workers' stress. A study of other types of work organisations could be undertaken to see if the relationship between communication and stress could be extended to other sectors. The analysis of the relationship between communication and stress should also be replicated in the same type of industry in different parts of Portugal and in other European and non-European countries. It would be interesting to see how other types of industries are dealing with communication, what the methods they use and how much communication is valued. The non-Portuguese companies' analysis would be useful to compare how different cultures value communication and stress. Cross-sectional studies are needed to see the magnitude of this study.

Fourth, it is also important to proceed with the analysis of horizontal verbal communication. The quality of this form of communication, as well as the methods individuals have to communicate with others of the same rank, is important for the aetiology of stress.

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Appendix

Appendix A

Organisational Verbal Communication Questionnaire

Employees

English Version

This is a study about communication quantity, quality and stress levels, There are two parts to this questionnaire. Carefully read the instructions in the beginning of each section. This is an anonymous questionnaire. Please try to be as accurate as possible. Your answers will be treated with the strictest confidence and will be used solely for the purposes of this study

Please indicate:

Age

Gender M ☐ F ☐

Education level

No of years in this organisation

ORGANISATIONAL VERBAL COMMUNICATION QUESTIONNAIRE

(Employees)

Please answer each question by putting a ✓ in the answer (s) that apply, or by writing your answer where space is provided. There are no right or wrong questions, and no trick questions.

1 - What are the methods used by your supervisor to give you information about your work? (tick ☒ all that apply)

In-house journal ☐Video magazine ☐Microphones ☐Letters ☐Notice-boards..... ☐Meetings..... ☐One to one communication ☐

2 - Do you get information on how you are doing at work?

Almost always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐

3 - Do you get the information you need about your work?

Almost always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐

4 - What information would you most like to have and you do not have? (Tick ☒ all that apply)

Salary changes ☐Company policies ☐Company performance..... ☐Management philosophy ☐

Company plans and outlook ☐

Benefits ☐

Organisation goals ☐

Organisational problems ☐

5 - Have you ever made a mistake because of inadequate information?

YES ☐

NO ☐

If YES what?

.....

.....

.....

6 - How frequently do you feel good about working for this organisation?

Almost always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐

7 - What are the sort of things that make you feel good about working for this organisation? (name as many as you remember)

.....

.....

.....

8 - What are the sort of things that make you feel bad about working for this organisation? (name as many as you remember)

.....

.....

.....

9 - How often do you feel proud to work for this organisation?

Almost always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐

10 - What do you know about your organisation (tick ☒ all that apply)

When it was founded ☐

Main clients..... ☐

Type of clients ☐

Company policies ☐

Company owners ☐

All company products ☐

11 - Do you think you have all the information you would like to have about the company?

YES ☐ NO ☐

If NO, what is missing?

.....
.....

12 - Do you, personally, buy the company's products?

Almost always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐

Justify your answer

.....
.....

13 - At your request did you communicate with your supervisor in the past month?

YES ☐ NO ☐

If YES, How often?

Between:

1-3 ☐

4-6 ☐

7-9 ☐

more ☐

Who were the hierarchical superior (s) you talked with?

.....

.....

And what did you talk about? (tick ☒ all that apply)

Family ☐

Meetings..... ☐

Salary ☐

Work performance ☐

Time ☐

Weather ☐

Personal things ☐

How did you communicate? (tick ☒ all that apply)

Face-to-face ☐

Via a memo ☐

Meeting ☐

Telephone..... ☐

Why did you use this method?

.....

.....

14 - Does the organisation care about your ideas and what you have to say?

Almost always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐

15 - Can you go anywhere you like inside the organisation?

YES ☐ NO ☐

If NO, what places are you not allowed to go?

.....
.....

16 - Is there someone controlling your work?

YES ☐ NO ☐

If YES then say how (tick ☒ all that apply)

Pace of work ☐

Number of pieces you produce ☐

Times you go out ☐

Times you go to the toilet ☐

Other (s) ☐

Please specify

.....
.....

17 - How many breaks are you allowed during a working day?

0 ☐ 1-3 ☐ 4-6 ☐ more ☐

18 - What is the nature of these breaks? (tick ☒ all that apply)

Coffee ☐

Lunch ☐

Toilet..... ☐

Phone..... ☐

Rest ☐

Other (s) ☐

Please specify

.....

19 - Do you challenge a superior if you think things are wrong or unfair?

YES ☐

NO ☐

If YES, in what circumstances?

.....

.....

And with what result?

.....

.....

20 - Do you have to "Clock in and out"?

YES ☐

NO ☐

If YES

21 - When you clock in later than you were supposed to, how does it affect you?

No consequence ☐

Salary reduction ☐

No pay rise after X times late ☐

Fired after X times late ☐

Reduced number of breaks ☐

Have to stay in the organisation till later ... ☐

Other (s) ☐

Please specify

.....
.....

22 - In meetings do employees have a voice?

YES ☐

NO ☐

23 - How would you characterise the process of decision making in the organisation you work. Use the following scale to characterise the centralisation level :

0%	20%	40%	60%	80%	100%
Decentralisation					Centralisation

Tanks for your cooperation ☺

Portuguese Version

Este estudo pretende analisar a qualidade e a quantidade de comunicação e os níveis de stress desta empresa. É composto por duas partes, devendo ler cuidadosamente as instruções no início de cada parte, e responder o mais sinceramente possível. Este é um questionário anónimo, e as suas respostas irão ser tratadas com a maior confidência e serão apenas utilizadas de acordo com os objectivos do estudo a ser realizado.

Por favor indique:

Idade

Sexo M ☐ F ☐

Escolaridade

Nº de anos nesta empresa

Iª Parte**QUESTIONÁRIO SOBRE A QUALIDADE E A QUANTIDADE DE
COMUNICAÇÃO NAS EMPRESAS**

(Empregados)

Por favor responda a cada pergunta assinalando com um ✓ a(s) resposta(s) que considerar como válida(s), ou escreva a sua resposta sempre que for providenciado espaço para tal. Não existem ratoeiras nem respostas correctas nem erradas.

1 - Quais são os métodos usados pelos seus superiores hierárquicos para lhe darem informações acerca do seu trabalho? (assinale ☒ todos os que considerar)

Jornal da empresa ☐Vídeo magazines..... ☐Microfone..... ☐Cartas ☐Placares ☐Reuniões..... ☐Comunicação face-a-face..... ☐Outro (s) ☐

Especifique.....

.....

2 - Os seus superiores dão-lhe informações sobre o seu desempenho no trabalho?

Sempre ☐ Muitas vezes ☐ Às vezes ☐ Raramente ☐ Nunca ☐

3 - Considera que lhe dão toda a informação necessária acerca do seu trabalho?

SIM ☐ NÃO ☐

4 - Dos aspectos que se seguem, sobre quais gostaria de obter informações e não tem?
(Assinale ☒ todos os que considerar)

Alterações no salário..... ☐

Normas da empresa..... ☐

Desempenho de empresa ☐

Filosofia de gestão ☐

Planos da empresa..... ☐

Benefícios ☐

Objectivos da empresa ☐

Problemas da Empresa..... ☐

Outro (s) ☐

Especifique.....

.....

5 - Alguma vez fez um erro devido à falta de informação?

SIM ☐ NÃO ☐

Se **SIM**, diga-nos o que aconteceu

.....

.....

.....

6 - Com que frequência costuma gostar de trabalhar nesta empresa?

7 Sempre ☐ Muitas vezes ☐ Às vezes ☐ Raramente ☐ Nunca ☐

7 - O quê que o faz gostar de trabalhar nesta empresa? (nomeie tantas razões quantas se lembrar)

.....

.....

.....

8 - O quê que o faz não gostar de trabalhar nesta empresa? (nomeie tantas razões quantas se lembrar)

.....

.....

.....

9 - Com que frequência se sente orgulhoso por trabalhar nesta empresa?

Sempre ☐ Muitas vezes ☐ Às vezes ☐ Raramente ☐ Nunca ☐

10 - O quê que sabe acerca da empresa na qual trabalha? (Assinale ☒ todos os que considerar)

- Quando foi fundada..... ☐
- Clientes principais..... ☐
- Tipo de clientes ☐
- Normas da empresa..... ☐
- Proprietários da empresa..... ☐
- Todos os produtos da empresa..... ☐
- Outro (s) ☐

Especifique.....

.....

11 - Na sua opinião tem toda a informação que gostaria de ter acerca da empresa?

SIM ☐ NÃO ☐

Se NÃO, de que informação sente falta?

.....

.....

.....

12 - Costuma comprar produtos da empresa?

Sempre ☐ Muitas vezes ☐ Às vezes ☐ Raramente ☐ Nunca ☐

Justifique a sua resposta

.....

.....

13 - Durante o último mês, e por iniciativa sua, comunicou com algum dos seus superiores hierárquicos?

SIM ☐ NÃO ☐

Se **SIM**, quantas vezes isto aconteceu?

Entre:

1-3 ☐ 4-6 ☐ 7-9 ☐ mais ☐

Quem foi o(s) superior(es) hierárquico com quem falou?

.....

.....

E sobre o quê que falaram? (Assinale ☒ todos os que considerar)

- Família ☐
- Reuniões..... ☐
- Salário ☐
- Desempenho profissional..... ☐
- Horas ☐
- Tempo ☐
- Assuntos pessoais ☐
- Outro (s) ☐

Especifique.....

.....

Que métodos usaram para comunicar? (Assinale ☒ todos os que considerar)

Comunicação face-a-face..... ☐

Memorando ☐

Reunião ☐

Telefone ☐

Outro (s) ☐

Especifique.....

.....

.....

Por que motivo usaram esse método?

.....

.....

14 - Na sua opinião a empresa preocupa-se com as suas ideias e com aquilo que você tem para dizer?

Sempre ☐ Muitas vezes ☐ Às vezes ☐ Raramente ☐ Nunca ☐

15 - Pode deslocar-se a qualquer dependência da empresa?

SIM ☐ NÃO ☐

Se **NÃO**, quais são as dependências a que não tem acesso?

.....

.....

.....

16 - Existe alguém a controlar-lhe o trabalho?

SIM ☐

NÃO ☐

Se SIM, de que forma esse controlo é exercido? (Assinale ☒ todos os que considerar)

Ritmo de trabalho..... ☐

Número de peças produzidas ☐

Número de vezes que sai ☐

Vezeas que vai à casa-de-banho ☐

Outro (s) ☐

Especifique.....

17 - Quantas paragens lhe são permitidas fazer durante um dia de trabalho?

0 ☐

1-3 ☐

4-6 ☐

mais ☐

18 - Qual a natureza dessas pausas? (Assinale ☒ todos os que considerar)

Café ☐

Almoço..... ☐

Casa-de-banho..... ☐

Telefone ☐

Descansar ☐

Outro (s)..... ☐

Especifique.....

19 - Já alguma vez desafiou um superior hierárquico por considerar que ele estava errado ou estava a ser injusto?

SIM ☐ NÃO ☐

Se SIM em que circunstâncias isso aconteceu?

.....
.....
.....

E com que resultados?

.....
.....

20 - Tem de "picar o ponto" quando entra e sai da empresa?

SIM ☐ NÃO ☐

Se SIM, o que lhe acontece quando "pica o ponto" mais tarde do que é suposto?

Não acontece nada ☐

Redução do salário desse mês..... ☐

Não há aumentos depois de X vezes..... ☐

Despedido depois de X vezes ☐

Menos intervalos ☐

Ficar na empresa até mais tarde ☐

Outro (s) ☐

Especifique.....

.....

21 - Nas reuniões os empregados têm "voz"?

SIM ☐ NÃO ☐

Appendix B

Organisational Verbal Communication Questionnaire

Managers

English Version

This is a study about stress and communication. Carefully read the intrusions in the beginning of this questionnaire. This is an anonymous questionnaire. Please try to be as accurate as possible. Your answers will be treated with the strictest confidence and will be used solely for the purposes of this study

Please indicate:

Age

Position

No of years in this position

No of years in the organisation

ORGANISATIONAL COMMUNICATION QUESTIONNAIRE

(Managers)

Please answer each question by putting a ✓ in the answer (s) that apply, or by writing your answer when space is provided. There are no right or wrong questions, and no trick questions.

1 - What are the methods the organisation uses to give production-line employees information about their work? (tick ☒ all that apply)

In-house journal ☐Video magazine ☐Microphones ☐Letters ☐Notice-boards..... ☐Meetings..... ☐One to one communication..... ☐

2 - Does the organisation give them information on how they are doing at work?

Almost always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐

3 - Does the organisation give this group of employees the information they need about their work?

Almost always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐

4 - What information, you think, production-line employees would most like to have and they do not have? (Tick ☒ all that apply)

Salary changes ☐

Company policies ☐

Company performance..... ☐

Management philosophy ☐

Company plans and outlook ☐

Benefits ☐

Organisation goals ☐

Organisational problems ☐

5 - Has any of these employees ever made a mistake because of inadequate information?

YES ☐

NO ☐

If YES what?

.....

.....

.....

6 - According to your opinion what percentage of workers from this group feel good about working for this organisation?

0-25% ☐

36-50% ☐

51-75% ☐

76-100% ☐

7 - What are the sort of things that make this group of employees feel good about working for this organisation? (name as many as you remember)

.....

.....

.....

8 - What are the sort of things that make this group of employees feel bad about working for this organisation? (name as many as you remember)

.....

.....

.....

9 - What is the percentage of employees from this group, you think, feel proud to work for this organisation?

0-25% ☐

26-50% ☐

51-75% ☐

76-100% ☐

Justify your answer

.....

.....

10 - What do employees from this group know about this organisation (tick ☒ all that apply)

When it was founded ☐

Main clients..... ☐

Type of clients ☐

Company policies ☐

Company owners ☐

Company products ☐

11 - Do you think this group of employees have all the information they would like to have about the company?

YES ☐

NO ☐

If **NO**, what do you think they are missing?

.....

.....

.....12 - Does
this group of employees buy the company's products?

YES ☐ NO ☐

If **YES**, how many do this?

1-25% ☐

26-50% ☐

51-75% ☐

76-100% ☐

13 - At your request did you communicate with employees from this group in the past month?

YES ☐ NO ☐

If **YES**, how often?

Between:

1-3 ☐

4-6 ☐

7-9 ☐

more ☐

And what did you talk about? (tick ☒ all that apply)

Family ☐

Meetings..... ☐

Salary ☐

Work performance ☐

Time ☐

Weather ☐

Personal things ☐

How did you communicate? (tick ☒ all that apply)

Face-to-face ☐

Via a memo ☐

Meeting ☐

Telephone..... ☐

Why did you use this method?.

.....
.....

14 - Does the organisation cares about production-line employees' ideas and what they have to say?

Almost always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never ☐

15 - Can these employees go anywhere they like inside the organisation?

YES ☐ NO ☐

If NO, what are the places they are not allowed to go?

.....
.....

16 - Are there supervisors controlling these employees' work?

YES ☐ NO ☐

If YES then say how (tick ☒ all that apply)

Pace of work ☐

Number of pieces you produce ☐

Times you go in and out ☐

Times you go to the toilet ☐

Other (s) ☐

Please specify

.....
.....

17 - How many breaks are these employees allowed to do during a working day?

0 ☐ 1-3 ☐ 4-6 ☐ more ☐

18 - What is the nature of these breaks? (tick ☒ all that apply)

Coffee ☐

Lunch ☐

Toilet..... ☐

Phone..... ☐

Rest ☐

Other (s) ☐

Please specify

.....

19 - Does this group of employees challenge supervisors if they think things are wrong or unfair?

YES ☐ NO ☐

If YES, in what circumstances?

.....
.....

And with what result?

.....
.....

20 - In meetings does this group have a voice?

YES ☐ NO ☐

21 - How would you characterise the process of decision making of this organisation.

Use the following scale to characterise the centralisation level:

0% 20% 40% 60% 70% 80% 100%

Decentralisation

Centralisation

Thanks for your cooperation ☺

Portuguese Version

Este questionário pretende analisar a qualidade e a quantidade de comunicação desta empresa. Leia cuidadosamente as instruções no início do questionário, e responda o mais sinceramente possível. Este é um questionário anónimo, as suas respostas irão ser tratadas com confidencialidade e serão apenas utilizadas de acordo com os objectivos do estudo a ser realizado.

Idade

Cargo ocupado.....

Nº de anos há que ocupa o mesmo

Nº de anos há que trabalha na empresa

**QUESTIONÁRIO SOBRE A QUALIDADE E A QUANTIDADE DE
COMUNICAÇÃO NAS EMPRESAS**

(Managers)

Por favor responda a cada pergunta assinalando com um ✓ a(s) resposta(s) que considerar como válida(s), ou escreva a sua resposta sempre que for providenciado espaço para tal. Não existem ratoeiras, nem respostas correctas nem erradas.

1 - Quais são os métodos, usados pela empresa, para darem informações aos empregados da linha de produção? (assinale ☒ todos os que considerar)

Jornal da empresa ☐Vídeo magazines..... ☐Microfone..... ☐Cartas ☐Placares ☐Reuniões..... ☐Comunicação face a face ☐Outro (s) ☐

Especifique.....

2 - A empresa fornece a estes mesmos funcionários informações sobre o seu desempenho no trabalho?

Sempre ☐ Muitas vezes ☐ Às vezes ☐ Raramente ☐ Nunca ☐

3 - Considera que a empresa dá aos funcionários, da linha de produção, toda a informação necessária acerca do seu trabalho?

SIM ☐ NÃO ☐

4 - Dos aspectos que se seguem, sobre quais julga que estes funcionários gostariam de obter informações e não tem? (assinale ☒ todos os que considerar)

Alterações no salário..... ☐

Normas da empresa..... ☐

Desempenho de empresa ☐

Filosofia de gestão ☐

Planos da empresa..... ☐

Benefícios ☐

Objectivos da empresa..... ☐

Problemas da Empresa..... ☐

Outro (s)..... ☐

Especifique.....

.....

5 - Algum empregado deste grupo cometeu alguma vez um erro por falta de informação?

SIM ☐

NÃO ☐

Se **SIM**, diga-nos o que aconteceu

.....

.....

6 - Na sua opinião, que percentagem de trabalhadores deste grupo gosta de trabalhar nesta empresa?

0-25% ☐

26-50% ☐

51-75% ☐

76-100% ☐

7 - Quais são, na sua opinião, os factores que fazem os trabalhadores deste grupo gostarem de trabalhar nesta empresa? (nomeie tantos quantos se lembrar)

.....

.....

8 - Quais são, na sua opinião, os factores que fazem os trabalhadores deste grupo não gostarem de trabalhar nesta empresa? nomeie tantos quantos se lembrar)

.....

.....

.....

9 - Na sua opinião qual é a percentagem de trabalhadores deste grupo que sente orgulho por trabalhar nesta empresa?

0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

10 - Na sua opinião, o quê que os trabalhadores deste grupo sabem acerca da empresa na qual trabalham? (assinale ☒ todos os que considerar)

Quando foi fundada..... ☐

Clientes principais..... ☐

Tipo de clientes..... ☐

Normas da empresa..... ☐

Proprietários da empresa..... ☐

Todos os produtos da empresa..... ☐

Outro (s) ☐

Especifique.....

.....

11 - Na sua opinião, este grupo de trabalhadores tem toda a informação que gostaria de ter acerca da empresa?

SIM ☐ NÃO ☐

Se NÃO, que informação julga que este grupo sente falta?

.....

.....

12 - Este grupo de empregados costuma comprar produtos fabricados por esta empresa?

SIM ☐ NÃO ☐

Se SIM, indique a percentagem

0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

13 - Durante o último mês, e por iniciativa sua, comunicou com algum empregado deste grupo?

SIM ☐ NÃO ☐

Se SIM, quantas vezes isto aconteceu?

Entre:

1-3 ☐ 4-6 ☐ 7-9 ☐ mais ☐

E sobre o quê que falaram? (assinale ☒ todos os que considerar)

Família ☐

Reuniões..... ☐

Salário ☐

Desempenho profissional..... ☐

Horas ☐

Tempo ☐

Assuntos pessoais ☐

Outro (s) ☐

Especifique.....

.....

Que métodos usaram para comunicar? (assinale ☒ todos os que considerar)

Comunicação face-a-face..... ☐

Memorando..... ☐

Reunião ☐

Telefone ☐

Outro (s) ☐

Especifique.....

.....

Por que motivo usaram esse método?

.....

.....

14 - A empresa preocupa-se com as ideias e com aquilo que este grupo de empregados tem para dizer?

Sempre ☐ Muitas vezes ☐ Às vezes ☐ Raramente ☐ Nunca ☐

15 - Este grupo de trabalhadores pode deslocar-se a qualquer dependência da empresa?

SIM ☐ NÃO ☐

Se NÃO, Quais são as dependências a que não tem acesso?

.....

.....

.....

16 - Existe alguém a controlar o trabalho deste grupo de trabalhadores?

SIM ☐ NÃO ☐

Se SIM, de que forma esse controlo é exercido? (assinale ☒ todos os que considerar)

Ritmo de trabalho..... ☐

Número de peças produzidas ☐

Número de vezes que sai ☐

Vezez que vai à casa-de-banho ☐

Outro (s) ☐

Especifique.....

.....

.....

17 - Quantas pausas pode este grupo fazer durante um dia de trabalho?

0 ☐ 1-3 ☐ 4-6 ☐ mais ☐

18 - Qual a natureza dessas pausas? (assinale ☒ todos os que considerar)

Café ☐

Almoço..... ☐

Casa-de-banho..... ☐

Telefone ☐

Descansar ☐

Outro (s) ☐

Especifique.....

19 - É possível a este grupo de empregados desafiar um superior hierárquico por considerar que ele está errado ou está a ser injusto?

SIM ☐ NÃO ☐

Se **SIM**, em que circunstâncias isso já aconteceu?

.....

.....

.....

E com que resultados?

.....

.....

.....

20 - Nas reuniões este grupo de empregados têm "voz"?

SIM ☐

NÃO ☐

21 - De que forma é que caracterizaria o processo de tomada de decisão desta empresa?

Use a escala, assinalando o nível de centralização que considera existir.

0%

20%

40%

60%

80%

100%

Descentralização

Centralização

Obrigado pela sua colaboração ☺

Appendix C

Work Stress Questionnaire

English Version

Part II

WORK STRESS QUESTIONNAIRE

(Section I)

Please answer each question by putting a ✓ in the box that corresponds to your level of agreement.

1 - When I am working I never know what time it is

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

2 - I would be happy for my own children to work for this company

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

3 - I feel valued at my work

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

4 - I never feel like screaming at my superiors

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

5 - My work is very important to the development of this organisation

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

6 - There are many opportunities for me to be happy in the future, inside this company

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

7 - My work is challenging and interesting

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

8 - I always put my best effort into my work

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

9 - I always feel pleased with what I have achieved

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

10 - I never feel palpitations at work

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

11 - During work I never look for something to relieve the boredom of my job

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

12 - If necessary I would be prepared to work a lot harder if it helped the company

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

13 - I feel that my training and/or qualifications have been put to good use in the job I do

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

14 - I will never be able to be as good employee as they want me to be

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

15 - My life, in this organisation, has mostly gone in the directions I aimed for

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

16 - During my working day I often feel like sleeping

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

17 - I feel I am part of this organisation's family

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

18 - The management makes promises and never keeps them

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

19 - I usually do not have headaches

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

20 - I feel angry that all I have done for the company is not recognised

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

21 - I have never thought that death would solve my work problems

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

22 - Even when things are not going very well in the organisation I feel they will get better eventually

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

23 - At the end of the working day I am usually bored

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

24 -I would have no hesitation about moving to another company if they offered me more money

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

25 -No-one would listen if I had an idea for improving the product/work

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

26 -At work I have people that need me

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

27 -I feel my work is very repetitive and /or monotonous

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

28 - I seem to cause problems to my co-workers when I am around them

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

29 - I would not accept everything the managers tell me I must do

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

30 - I sometimes feel there is not enough air to breath

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

31 - I am glad I am called on to make difficult decisions on work

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

32 - Superiors' good feelings about me are a mistake

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

33 - I would not work at weekends even if they asked me to

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

34 - I like the way the company values the workforce

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

35 - I usually feel that the people who are important to me at work do not understand my feelings

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

36 - I never tell anybody where I work

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

37 - I never felt like damaging the boss's property to get my own back

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

38 - I sometimes feel that no-one would notice if I left this job

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

39 - Sometimes I feel like having a good argument with my superiors or co-workers

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

40 - The company is as good with as without me

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

41 - I feel that I have no control over my job

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

42 - I often feel dizzy at work

Strongly agree ☐ Agree ☐ Disagree ☐ Strongly Disagree ☐

(Section II)

Please answer each question by putting a ✓ in the answer (s) that apply, or by writing your answer when space is provided.

1 - Do you usually smoke?

YES ☐ NO ☐

If YES, answer to questions no. 2,3 and 4 and then go to no. 7

If NO, answer to question no. 5 and 6 and then go to no.7

2 - How many cigarettes you smoke every day?

1-5 ☐ 6-10 ☐ 11-20 ☐ More ☐

3 - Have you increased the number of cigarettes you smoke, in the last three months?

YES ☐ NO ☐

4 - When did you start smoking?

Last 3 months ☐ Last year ☐ 2-5 years ago ☐ 6-10 years ago ☐ Before ☐

5 - In the past, have you been a smoker?

YES ☐ NO ☐

If YES, when did you quit?

.....

6 - Do you occasionally smoke?

YES ☐ NO ☐

If YES, when does it happens?

.....

7 - Do you usually drink coffee?

YES ☐ NO ☐

If YES, answer no. 8 and 9, then go to 11

If NO, answer no 10, then go to 11

8 - How many coffees you drink every day?

1-3 ☐ 4-6 ☐ 7-9 ☐ More ☐

9 - Did you drink more coffee in the last three months?

YES ☐ NO ☐

10 - Do you occasionally drink coffee?

YES ☐ NO ☐

If YES, When?

.....

11 - Do you usually drink alcoholic drinks?

YES ☐ NO ☐

If YES, answer no. 12, 13 and 15, then go to 17.

If NO, answer no. 16, then go to 17

12- What kind of alcoholic drinks do you take? (tick ☒ all that apply)

Wine ☐

Whisky ☐

Vodka ☐

Beer ☐

Fire water ☐

Other..... ☐

Please, specify

.....

13 - How much do you drink, on average?

1-3 glasses ☐ 4-6 glasses ☐ ☐ 7-9 glasses ☐ More ☐

14 - Did your alcohol intake increased in the last three months?

YES ☐ NO ☐

15 - Are you an occasional drinker?

YES ☐ NO ☐

If YES, when?

.....

16 - Do you usually have problems in falling asleep?

YES ☐ NO ☐

17 - Do you often wake up in the middle of the night and cannot fall asleep again?

YES ☐ NO ☐

18 - Do you usually wake up in the morning feeling tired, like you did not sleep at all?

YES ☐ NO ☐

19 - If you have any of the sleeping problems mentioned above, when did they started?

Last week ☐ Last month ☐ Two-three months ago ☐ Before all these ☐

20 - Did you gain or lose weight in the last three months?

YES ☐ NO ☐

If YES, How much did you gain or lose?

1-3 kg ☐ 4-6 ☐ 7-9 ☐ 10-12 ☐ More ☐

21 - Did you change your eating habits in the last three months?

YES ☐ NO ☐

If YES, What happened? (tick ☒ all that apply)

I started eating more ☐ less ☐ vegetables

I started eating more ☐ less ☐ chocolates

I started eating more ☐ less ☐ fat food

I started eating more ☐ less ☐ fish

I started eating more ☐ less ☐ fruit

I started eating more ☐ less ☐ fast food

Thank you for your co-operation ☺

Portuguese Version

IIª Parte**QUESTIONÁRIO SOBRE STRESS NO TRABALHO**

(Secção I)

Por favor responda a cada pergunta, assinalando com um ✓ o seu nível de acordo com as frases que se seguem.

1 - Quando estou a trabalhar nunca sei que horas são

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

2 - Sentir-me-ia feliz se os meus filhos trabalhassem nesta empresa

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

3 - No meu local de trabalho, sinto-me valorizado(a)

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

4 - Nunca me apetece "mandar um berro" aos meus superiores hierárquicos

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

5 - O meu trabalho é muito importante para o progresso desta empresa

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

6 - No futuro, ainda existem muitas oportunidades de eu ser feliz no seio desta empresa

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

7 - O meu trabalho é desafiador e interessante

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

8 - No trabalho eu dou sempre o meu máximo

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

9 - Fico sempre satisfeito(a) com aquilo que consigo atingir no trabalho

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

10 - Nunca senti palpitações enquanto trabalhava

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

11 - No trabalho nunca sinto necessidade de fazer outras coisas para diminuir o meu aborrecimento

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

12 - Se fosse necessário eu trabalharia muito mais arduamente para ajudar a empresa

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

13 - Sinto que a minha formação e/ou estudos estão a ser bem aproveitados no trabalho que eu faço

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

14 - Nunca serei capaz de ser tão bom empregado(a) como eles querem que eu seja

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

15 - A minha vida no interior desta organização tem seguido as direcções que eu quero

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

16 - Durante as horas de trabalho apetece-me, muitas vezes, dormir

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

17 - Sinto que faço parte da organização como se esta fosse uma família

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

18 - Os superiores fazem-me promessas mas nunca as cumprem

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

19 - Normalmente não tenho dores de cabeça

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

20 - Sinto-me zangado(a) pois tudo o que eu fiz pela empresa não é reconhecido

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

21 - Nunca pensei que morrer seria a solução para os meus problemas de trabalho

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

22 - Mesmo quando as coisas não estão a correr muito bem na empresa sinto que, um dia elas melhorarão

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

23 - No fim do meu dia de trabalho sinto-me, normalmente, aborrecido(a)

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

24 - Eu não hesitaria em mudar de emprego se outra empresa me oferece mais dinheiro

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

25 - Ninguém me daria ouvidos se tivesse uma ideia que ajudasse a melhorar o trabalho

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

26 - No trabalho tenho pessoas que precisam de mim

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

27 - O meu trabalho é muito repetitivo e/ou monótono

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

28 - Eu causo problemas aos meus companheiros de trabalho quando estou perto deles

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

29 - Eu nunca aceitaria fazer tudo o que os meus superiores me pedissem

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

30 - Por vezes parece-me que não há ar suficiente para eu respirar

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

31 - Fico feliz por me chamarem para tomar decisões importantes no trabalho

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

32 - Os meus superiores não têm motivos para ter uma boa opinião sobre mim

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

33 - Eu nunca trabalharia durante os fins de semana mesmo que eles me pedissem

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

34 - Gosto da forma como a empresa valoriza os trabalhadores

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

35 - As pessoas que são importantes para mim no trabalho nunca compreendem os meus sentimentos

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

36 - Nunca digo a ninguém onde eu trabalho

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

37 - Nunca senti vontade de danificar a propriedade do patrão

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

38 - Por vezes sinto que ninguém notaria se eu deixasse este emprego

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

39 - Por vezes apetece-me discutir com os meus superiores e/ou com os meus colegas de trabalho

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

40 - Esta empresa é tão boa comigo como sem mim

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

41 - Sinto que não tenho nenhum controlo sobre o meu trabalho

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

42 - Muitas vezes sinto-me tonto(a) quando estou a trabalhar

Concordo plenamente ☐ Concordo ☐ Discordo ☐ Discordo plenamente ☐

(Secção II)

Por favor responda a cada pergunta, assinalando com um ✓ a resposta(s) que estiver(em) mais próxima(s) daquilo que se passa consigo, ou escrevendo a sua resposta sempre que lhe for providenciado espaço.

1 - Normalmente fuma?

SIM ☐ NÃO ☐

Se **SIM**, responda às perguntas n.º. 2, 3 e 4 e depois vá para a n.º. 7

Se **NÃO**, responda às perguntas n.º. 5 e 6 e depois vá para a n.º.7

2 - Quantos cigarros fuma por dia?

1-5 ☐ 6-10 ☐ 11-20 ☐ Mais ☐

3 - Durante os últimos três meses aumentou o n.º de cigarros que fuma por dia?

SIM ☐ NÃO ☐

4 - Quando é que você começou a fumar?

Nos últimos 3 meses ☐ Ano Passado ☐ Há 2-5 anos ☐ Há 6-10 anos ☐ Antes ☐

5 - Já foi fumador?

SIM ☐ NÃO ☐

Se **SIM**, quando é que deixou de fumar?

.....

6 - Fuma de vez em quando?

SIM ☐ NÃO ☐

Se **SIM**, quando é que isso acontece?

.....

7 - Bebe café todos os dias?

SIM ☐ NÃO ☐

Se **SIM**, responda às perguntas n.º 8 e 9, depois vá para a n.º 11

Se **NÃO**, responda às perguntas n.º 10, depois vá para a n.º 11

8 - Quantos cafés bebe por dia?

1-3 ☐ 4-6 ☐ 7-9 ☐ Mais ☐

9-- Nos últimos três meses aumentou o seu consumo de café?

SIM ☐ NÃO ☐

10 - Bebe café de vez em quando?

SIM ☐ NÃO ☐

Se **SIM**, Quando?

.....

11 - Costuma beber bebidas alcoólicas?

SIM ☐ NÃO ☐

Se **SIM**, responda às perguntas n.º 12, 13 e 15, depois vá para a n.º 17.

Se **NÃO**, resonda à pergunta n.º 16, depois vá para a n.º 17

12- Que tipo de bebidas alcoólicas costuma beber? (Assinale com um ✓ as que costumar beber)

Vinho.....☐

Whisky☐

Vodka.....☐

Cerveja☐

Água ardente☐

Outras☐

Por favor especifique

.....

...

13 - Na média quanto é que costuma beber?

1-3 copos ☐ 4-6 copos ☐ 7-9 copos ☐ Mais ☐

14 - Durante os últimos três meses aumentou o consumo de bebidas alcoólicas?

SIM ☐ NÃO ☐

15 - De vez em quando bebe?

SIM ☐ NÃO ☐

Se SIM, quando?

.....

...

16 - Costuma ter problemas para adormecer?

SIM ☐ NÃO ☐

17 - Costuma acordar no meio da noite e depois não consegue adormecer outra vez?

SIM ☐ NÃO ☐

18 - Costuma acordar cansado(a) com a sensação de que não dormiu nada?

SIM ☐ NÃO ☐

19 - Se tem algum destes problemas de sono, quando é que isso lhe começou a acontecer?

Semana passada ☐ Mês passado ☐ 2-3 meses atrás ☐ Há mais tempo ☐

20 - Ganhou ou perdeu peso nos últimos três meses?

SIM ☐ NÃO ☐

Se SIM, Quanto é que perdeu ou ganhou?

1-3 kg ☐ 4-6 Kg ☐ 7-9 Kg ☐ 10-12 Kg ☐ Mais ☐

21 - Modificou os seus hábitos alimentares nos últimos três meses?

SIM ☐ NÃO ☐

Se **SIM**, o que modificou? (assinale ☒ todos os que considerar)

Comecei a comer mais ☐ menos ☐ vegetais

Comecei a comer mais ☐ menos ☐ chocolates

Comecei a comer mais ☐ menos ☐ gorduras

Comecei a comer mais ☐ menos ☐ peixe

Comecei a comer mais ☐ menos ☐ fruta

Comecei a comer mais ☐ menos ☐ "fast food" (ex. cachorros, pizzas, etc)

Obrigado pela sua colaboração ☺

Appendix D

Non- Verbal Communication Check-list

English Version

NON-VERBAL COMMUNICATION CHECKLIST**1- How does the organisation look like from outside**Number of buildings ☐Gardens? ☐Cleanliness ☐Windows ☐**2 - How does the organisation look like from inside?****Offices**Where? ☐Small rooms ☐Open spaces ☐Windows ☐Light ☐Noise ☐Cleanliness ☐**Production-line**Where? ☐Small rooms ☐Open spaces ☐Windows ☐Light ☐Noise ☐Cleanliness ☐

3 - How are production-line employees distributed in space?

Distances in meters.....

Can they talk..... YES ☐ NO ☐Can they establish eye contact.....YES ☐ NO ☐

4 - How are accesses between production line and offices?

☐ Corridors

Number.....

Height.....

Light.....

☐ Doors

Numbers.....

Signs.....

Indications

☐ Noise

How does the noise change

.....
.....

5 - Is there a balcony or window overlooking the place where production takes place?

YES ☐ NO ☐

6- Is there someone supervising production-line employees?

YES ☐ NO ☐

If YES

7 - How many employees per supervisor?

1-4 ☐ 5-8 ☐ 9-12 ☐ More ☐.....

And

8 - How is the supervision done?

Where is the supervisor located

.....

.....

Employees can see them ☐

Employees can't see them ☐

How does he give orders :

Words ☐

Hand movements ☐

Is he always present

YES ☐ NO ☐

9 - Is there a canteen?

YES ☐ NO ☐

If YES:

10 - Do all organisational members eat there?

YES ☐ NO ☐

If YES

11- Where do they sit?

Special tables for some members..... ☐

No special tables ☐

No special tables but they do not mix..... ☐

No special tables and they mix ☐

12-How does this group of employees behave when they are near a superior?

- Nervous ☐
- Relaxed ☐
- Can face him ☐
- Can't face him ☐
- Two friends talking ☐
- Superior-subordinate talking ☐

13 - How do superiors behave when they are near this group of employees?

- Friendly ☐
- Bossy ☐
- Encourage communication ☐
- Do not encourage communication ☐
- Relaxed ☐
- Nervous ☐
- Eye contact ☐
- No eye contact ☐

Portuguese Version

NON-VERBAL COMMUNICATION CHECKLIST**1- Qual o aspecto exterior da empresa?**Numero de edificios..... ☐Jardins? ☐Limpeza..... ☐Janelas ☐**2 - Qual o aspecto interior da empresa?****Escritórios:**Onde são..... ☐Pequenos compartimentos ☐Espaço amplo ☐Janelas ☐Luz ☐Barulho..... ☐Limpeza..... ☐**Linha de produção.**Onde são..... ☐Pequenos compartimentos ☐Espaço amplo ☐Janelas ☐Luz ☐Barulho..... ☐Limpeza..... ☐

3 - Como estão os empregados da linha de produção distribuídos no espaço?

Distancia em metros.....

Podem conversar..... SIM ☐ NÃO ☐Podem estabelecer contacto visual.....SIM ☐ NÃO ☐

4 - Como são os acesso entre a linha de produção e os escritórios?

☐ Corredores

Numero.....

Comprimento.....

Luz.....

☐ Portas

Números.....

Indicações.....

Avisos.....

☐ Barulho

Como é que este se altera

5 - Existe alguma varanda ou janela em volta do local da linha de produção?

SIM ☐ NÃO ☐

6- Existe alguém a supervisionar os empregados da linha-de-produção?

SIM ☐ NÃO ☐

Se SIM

7 - Quantos empregados controla um supervisor?

1-4 ☐ 5-8 ☐ 9-12 ☐ Mais ☐.....

E

8 - De que forma é feita a supervisão?

Onde ficam os supervisores

.....

.....

Podem ser vistos pelos empregados..... ☐Não podem ser vistos pelos empregados ... ☐

De forma é que o supervisor dá ordens :

Palavras ☐Movimentos das mãos ☐

Está sempre presente?

SIM ☐ NÃO ☐

9 - Existe alguma cantina?

SIM ☐ NÃO ☐

Se SIM:

10 - Todos os membros da organização comem lá?

SIM ☐ NÃO ☐

Se SIM

11- Onde é que eles se sentam?

Mesas especiais- alguns membros ☐Não existem mesas especiais ☐Não mesas especiais/ não se misturam ☐

Não mesas especiais/ misturam-se..... ☐

12- De que forma se comporta este grupo de empregados quando estão próximos de um superior hierárquico?

Nervosos ☐

Relaxados..... ☐

Olham nos olhos ☐

Não olham nos olhos..... ☐

Dois amigos a conversarem ☐

Superior-subordinado a conversarem ☐

13 - De que forma se comportam os superiores hierárquicos quando estão próximos deste grupo de empregados?

Amigavelmente ☐

Autoritariamente ☐

Encorajam a comunicação ☐

Não encorajam a comunicação ☐

Relaxadamente ☐

Nervosamente ☐

Olham nos olhos ☐

Evitam contacto visual..... ☐

Não mesas especiais/ misturam-se..... ☐

12- De que forma se comporta este grupo de empregados quando estão próximos de um superior hierárquico?

Nervosos ☐

Relaxados..... ☐

Olham nos olhos ☐

Não olham nos olhos..... ☐

Dois amigos a conversarem ☐

Superior-subordinado a conversarem ☐

13 - De que forma se comportam os superiores hierárquicos quando estão próximos deste grupo de empregados?

Amigavelmente..... ☐

Autoritariamente ☐

Encorajam a comunicação ☐

Não encorajam a comunicação ☐

Relaxadamente ☐

Nervosamente ☐

Olham nos olhos ☐

Evitam contacto visual..... ☐

Appendix E

Rating Scale

ORGANISATIONAL COMMUNICATION QUESTIONNAIRE

DOWNWARD COMMUNICATION (Questions no. 1, 2, 3, 4, 5, 10 and 11)		
QUESTION	ANSWER	Points
1 - What are the methods used by your supervisor to give you information about your work? (tick <input checked="" type="checkbox"/> all that apply)	In-house journal	1
	Video magazine	1
	Microphones	1
	Letters	1
	Notice-boards	1
	Meetings	2
	1/1 communication	2
2 - Do you get information on how you are doing at work?	Almost always	4
	Often	3
	Sometimes	2
	Rarely	1
	Never	0
3 - Do you get the information you need about your work?	Almost always	4
	Often	3
	Sometimes	2
	Rarely	1
	Never	0
4 - What information would you most like to have and you do not have? (Tick <input checked="" type="checkbox"/> <u>all</u> that apply)	No tick means 8 points	
	Salary changes	-1
	Company policies	-1
	Company perform.	-1
	Manag. Philosophy	-1
	Plans and outlook	-1
	Benefits	-1
	Organisation goals	-1
	Organis. problems	-1

5 - Have you ever made a mistake because of inadequate information?	Yes	0
	No	1
10 - What do you know about your organisation (tick <input checked="" type="checkbox"/> all that apply)	When was founded	1
	Main clients	1
	Type of clients	1
	Company policies	1
	Company owners	1
	Company products	1
11 - Do you think you have all the information you would like to have about the company?	Yes	1
	No	0

FEELINGS TOWARDS THE WORKPLACE		
(Questions no. 6, 7, 8 and 9)		
QUESTION	ANSWER	Points
6 - How frequently do you feel <u>good</u> about working for this organisation?	Almost always	4
	Often	3
	Sometimes	2
	Rarely	1
	Never	0
7 - What are the sort of things that make you feel <u>good</u> about working for this organisation? (name as many as you remember)	Nothing	0
	1-2	2
	3-4	4
8 - What are the sort of things that make you feel <u>bad</u> about working for this organisation? (name as many as you remember)	Nothing	4
	1-2	2
	3-4	0
9 - How often do you feel <u>proud</u> to work for this organisation?	Almost always	4
	Often	3
	Sometimes	2
	Rarely	1
	Never	0
12 - Do you, personally, buy the company's products?	Almost always	4
	Often	3
	Sometimes	2
	Rarely	1
	Never	0

UPWARD Communication		
(Questions no. 13 and 14)		
QUESTION	ANSWER	Points
13 - At your request did you communicate with your supervisor in the past month?	Yes	1
	No	0
If YES, How often? Between:	1-3	1
	4-6	2
	7-9	3
	More	4
And what did you talk about? (tick <input checked="" type="checkbox"/> all that apply)	Family	2
	Meetings	1
	Salary	1
	Work perform	1
	Time	1
	Weather	2
How did you communicate? (tick <input checked="" type="checkbox"/> all that apply)	Person. things	2
	Face-to-face	2
	Via a memo	1
	Meeting	1
14 - Does the organisation care about your ideas and what you have to say?	Telephone	1
	Almost always	4
	Often	3
	Sometimes	2
	Rarely	1
	Never	0

DEMOCRACY AND POWER		
(Questions no. 15, 16, 17, 18, 19, 20, 21, 22 and 23)		
QUESTION	ANSWER	Points
15 - Can you go anywhere you like inside the organisation?	Yes	1
	No	0
16 - Is there someone controlling your work?	Yes	0
	No	1
If YES then say how (tick <input checked="" type="checkbox"/> all that apply)	No tick means 5 points	
	Pace of work	-1
	No pieces	-1
	Times go out	-1
	Times toilet	-1
	Other (s)	-1
17 - How many breaks are you allowed during a working day?	0	0
	1-3	1
	4-6	2
	More	3
18 - What is the nature of these breaks? (tick <input checked="" type="checkbox"/> all that apply)	Coffee	1
	Lunch	1
	Toilet	1
	Phone	1
	Rest	2
19 - Do you challenge a superior if you think things are wrong or unfair?	Yes	1
	No	0
20 - Do you have to "Clock in and out"?	Yes	1
	No	0
21 - When you clock in later than you were supposed to, how does it affect you?	No	6
	Consequences	
	Take 1 each they tick	
	Salary Reduction	-1

	No pay rise	-1
	Fired after	-1
	Reduced breaks	-1
	Stay later	-1
	Other (s)	-1
22 - In meetings do employees have a voice?	Yes	1
	No	0
23 - How would you characterise the process of decision making in the organisation you work. Use the following scale to characterise the centralisation level :	0%	5
	20%	4
	40%	3
	60%	2
	80%	1
	100%	0

WORK STRESS QUESTIONNAIRE

(Section I)

Psychological Scale

	Strongly agree	Agree	Disagre e	Strongly Disagree
QUEST.	POINTS			
1	0	1	2	3
2	0	1	2	3
3	0	1	2	3
4	0	1	2	3
5	0	1	2	3
6	0	1	2	3
7	0	1	2	3
8	0	1	2	3
9	0	1	2	3
10	0	1	2	3
11	0	1	2	3
12	0	1	2	3
13	0	1	2	3
14	4	3	2	1
15	0	1	2	3
16	4	3	2	1
17	0	1	2	3
18	4	3	2	1
19	0	1	2	3
20	4	3	2	1
21	0	1	2	3
22	0	1	2	3
23	4	3	2	1
24	4	3	2	1

25	4	3	2	1
26	0	1	2	3
27	4	3	2	1
28	4	3	2	1
29	4	3	2	1
30	4	3	2	1
31	0	1	2	3
32	4	3	2	1
33	4	3	2	1
34	0	1	2	3
35	4	3	2	1
36	4	3	2	1
37	0	1	2	3
38	4	3	2	1
39	4	3	2	1
40	4	3	2	1
41	4	3	2	1
42	4	3	2	1

(Section II)

Behavioural Scale

CIGARRETS CONSUPTION (Questions no. 1, 2, 3, 4, 5 and 6)		
QUESTION	ANSWER	POINTS
1 - Do you usually smoke?	Yes	1
	No	0
2 - How many cigarettes do you smoke every day?	1-5	1
	6-10	2
	11-20	3
	More	4
3 - Have you increased the number of cigarettes you smoke, in the last three months?	Yes	1
	No	0
4 - When did you start smoking?	Last 3 months	5
	Last year	4
	2-5 years ago	3
	6-10 years ago	2
	Before	1
5 - In the past, have you been a smoker?	Yes	1
	No	0
6 - Do you occasionally smoke?	Yes	1
	No	0

CAFFEINE INTAKE (Questions no. 7, 8, 9 and 10)		
QUESTION	ANSWER	POINTS
7 - Do you usually drink coffee?	Yes	1
	No	0
8 - How many coffees do you drink every day?	1-3	1
	4-6	2
	7-9	3
	More	4
9 - Did you drink more coffee in the last three months?	Yes	1
	No	0
10 - Do you occasionally drink coffee?	Yes	1
	No	0

DRINKING HABITS		
(Questions no. 11, 12, 13, 14 and 15)		
QUESTION	ANSWER	POINTS
11 - Do you usually have alcoholic drinks?	Yes	1
	No	0
12- What kind of alcoholic drinks do you have? (tick <input checked="" type="checkbox"/> all that apply)	Wine	Qualitative information
	Whisky	
	Vodka	
	Beer	
	Brandy	
	Other	
13 - How much do you drink, on average?	1-3 glasses	1
	4-6 glasses	2
	7-9 glasses	3
	More	4
14 - Did your alcohol intake increased in the last three months?	Yes	1
	No	0
15 - Are you an occasional drinker?	Yes	1
	No	0

SLEEPING PATTERNS		
(Questions no. 16, 17, 18 and 19)		
QUESTION	ANSWER	POINTS
16 - Do you usually have problems in falling asleep?	Yes	1
	No	0
17 - Do you often wake up in the middle of the night and cannot fall asleep again?	Yes	1
	No	0
18 - Do you usually wake up in the morning feeling tired, like you did not sleep at all?	Yes	1
	No	0
19 - If you have any of the sleeping problems mentioned above, when did they start?	Last week	1
	Last month	2
	2-3 months ago	3
	Before all these	4

EATING HABITS		
(Questions no. 20 and 21)		
QUESTION	ANSWER	POINTS
20 – Did you gain or lose weight in the last three months?	Yes	1
	No	0
If YES, How much did you gain or lose?	1-3 kg	1
	4-6	2
	7-9	3
	10-12	4
	More	5
21 - Did you change your eating habits in the last three months?	Yes	1
	No	0
If YES, What happened? (tick <input checked="" type="checkbox"/> all that apply)	less vegetables	1
	more chocolates	1
	more fat food	1
	less fish	1
	less fruit	1
	more fast food	1

Appendix F

Raw Data Table

ORGANISATIONAL COMMUNICATION SCALES					STRESS	INDUST R TYPE
D. C.	F. T. W.	U. C.	D. P.	Total Score	Stress	Large
5	6	0	10	21	76	Men (13)
7	5	0	13	25	70	
13	5	0	11	29	68	
7	8	6	11	32	66	
12	9	0	11	32	53	
15	9	0	10	34	58	
12	8	0	18	38	52	
11	15	0	14	40	39	
13	12	13	12	50	32	
16	15	10	12	53	46	
16	15	8	14	53	48	
18	16	8	16	58	35	
21	13	4	21	59	49	
4	7	0	10	21	88	Women (41)
7	8	0	10	25	86	
11	6	0	10	27	82	
7	9	0	11	27	81	
14	7	0	10	31	67	
11	10	0	12	33	71	
10	8	5	10	33	69	
12	10	0	12	34	65	
14	10	0	11	35	66	
14	9	0	12	35	70	
14	8	0	16	38	65	
11	12	1	14	38	62	

13	9	0	16	38	66	
10	16	2	11	39	49	
15	13	9	11	39	60	
12	10	8	10	40	66	
17	10	0	13	40	59	
14	10	2	14	40	48	
15	14	3	8	41	50	
11	8	10	12	41	53	
16	9	1	15	41	58	
13	14	0	15	42	55	
15	14	2	11	42	56	
15	8	3	16	42	54	
11	14	7	12	44	50	
16	10	1	18	45	60	
19	10	2	15	46	43	
12	9	10	16	47	56	
18	14	0	16	48	41	
11	13	1	16	48	42	
18	16	0	14	48	44	
16	16	4	14	50	43	
18	12	8	12	50	45	
15	16	7	15	53	38	
16	16	6	17	55	32	
20	12	5	23	60	25	
17	17	8	18	60	24	
16	19	5	20	61	29	
19	15	12	18	64	28	
22	15	5	24	66	24	
20	14	15	17	66	21	
11	8	2	13	35	70	Small Indust
16	8	4	16	44	61	Women

						(39)
14	7	2	18	41	61	
8	8	0	15	31	64	
16	12	1	15	44	57	
7	9	0	11	27	82	
14	8	2	15	39	63	
16	11	8	20	55	62	
13	8	6	14	41	61	
11	8	5	10	34	67	
14	8	6	15	43	61	
17	7	7	16	47	60	
20	8	5	17	50	62	
18	10	3	22	53	47	
17	7	9	16	49	61	
15	9	5	18	47	60	
12	12	11	15	50	57	
15	8	7	7	37	72	
20	10	10	19	59	40	
19	9	2	16	46	59	
14	15	10	20	59	58	
20	10	3	16	49	42	
17	10	2	20	49	63	
13	10	2	15	40	70	
18	8	9	19	54	60	
20	9	2	15	46	66	
15	6	0	13	34	79	
15	5	6	17	43	67	
17	8	8	18	51	45	
16	8	2	12	38	67	
18	10	3	17	49	62	
21	14	10	16	61	54	
11	10	0	12	33	71	

10	12	0	10	32	86	
15	10	7	11	43	62	
10	4	0	10	24	75	
24	12	2	18	56	42	
16	8	4	13	41	61	
13	12	2	17	44	53	
17	16	1	16	50	52	Men (3)
11	5	7	15	38	63	
7	2	0	9	18	70	

Appendix G

Non-verbal Communication Observations

This section will be presenting the results concerning the non-verbal communication observations.

Appearance	Large company	Small company
No. of buildings	1 large building	1 small building
Gardens	No	No
Cleanliness	Yes	Yes
Windows	Several	Not many

Table 15 -Organisation outside appearance

Offices	Large company	Small company
Where?	In the façade	In the façade
Small rooms	Yes	No
Open spaces	Yes	Yes
Windows	Yes	Yes
Light	Natural	Natural
Noise	No	No
Cleanliness	Yes	Yes
Temperature	Agreeable	Agreeable

Table 16 - Organisation inside appearance: The office characteristics

Production Line	Large company	Small company
Where?	Same building	Same building
Small rooms	No	No
Open spaces	Yes	Yes
Windows	No	No
Light	Artificial	Artificial
Noise	Yes	Yes
Cleanliness	No	No
Temperature	Too hot	Too hot

Table 17- Organisation inside appearance: The production-line characteristics

	Large company	Small company
Disposition	Production line in L or U	Production line In line
Distances	< 1 m	1,5-2 m
Can they talk	Yes	Difficulty
Eye contact	Yes	Difficulty

Table 18- Production-line employees distribution in space

		Large company	Small company
Corridors	Number	4	1
	Light	Artificial	Artificial
Doors	Numbers	5	1
	Signs	No	No
	Indications	No	No
Noise	How does it change	The noise increases as more as we are closer to the production line	The noise increases as more as we are closer to the production line

Table 19-Accesses between production line and offices

Large company	Small company
None	Yes, there is a wall with small windows between the offices and the production line

Table 20- The existence of a balcony or window around the place where production takes place

Large company	Small company
Yes	Yes

Table 21- Production-line supervision

	Large company	Small company
1-4		
5-8		✓
9-12	✓	
More		

Table 22 - Number of employees per supervisor

	Large company	Small company
What is supervised	Behaviour; quality of production; number of pieces	Behaviour; quality of production
Where does supervisor stay	Walks around the production line	Walks around the production line
Employees can see them	Yes	If they are not in the balcony behind the wall, yes
How does he give orders	Verbally	Verbally
Is he always present	No	No

Table 23 - Type of supervision done

Large company	Small company
No, there is a small bar	No

Table 24- Does the company have a canteen?

	Large company	Small company
Nervous	No	Yes
Relaxed	Yes	No
Can face him	Yes	Yes
Two friends talking	Yes	No
Superior-subordinate talking	No	Yes

Table 25- Employees behaviour when near a superior

	Large company	Small company
Friendly	Yes	Yes
Bossy	No	No
Encourage communication	Yes	No
Relaxed	Yes	Yes
Look in the eyes	Yes	No

Table 26- Superior behaviour when near this group of employees

Appendix H

Employees vs. employers perceptions of verbal communication

EMPLOYEES VS. EMPLOYERS PERCEPTIONS OF VERBAL COMMUNICATION

Information about work	Small Company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Yes	25	59.5%	1	49	90,74%	4
No	17	40.5%	0	5	9,25%	0

Table 27-Information about work yes or no?

Methods used by supervisors to give information about work	Small Company			Large company		
	No. of answers given by employees	% (42)	Manager	No. of answers given by employees	% (54)	Manager
House Journal	0	0%	0	0	0%	0
Video magazine	0	0%	0	1	1,70%	0
Microphone	15	37.7%	1	3	5,50%	0
Letters	0	0%	0	2	3,70%	0
Notice-boards	17	40.5%	1	8	14,80%	1
Meetings	29	69.04%	1	13	24,07%	1
One by one communication	35	83.3%	0	45	83,30%	1

Table 28- Methods used by supervisors to give employees information about work

Information on how employees are doing at work	Small Company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Almost always	8	19.04%	100%	14	25,92%	0
Often	4	9.5%	0%	5	9,25%	100%
Sometimes	19	45.2%	0%	18	33,30%	0
Rarely	5	11.9%	0%	13	24,07%	0
Never	6	14.3%	0%	4	7,40%	0

Table 29- Frequency that employees receive information on how they are doing at work

Information employees do not have	Small Company			Large company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Salary changes	18	42.9%	0	20	37,03%	0
Company Policies	16	38.1%	0	7	12,96%	0
Company performance	5	11.9%	1	8	14,80%	0
Management Philosophy	8	19.04%	0	6	11,10%	0
Company plans and outlook	11	26.2%	0	10	18,51%	1
Benefits	11	26.2%	1	17	31,48%	0
Organisation goals	10	23.8%	1	16	29,60%	0
Organisational problems	5	11.9%	1	20	37,03%	1

Table 30- The type of information that employees say they do not receive

Mistakes as a result of inadequate information	Small Company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Yes	17	40.5%	0	25	46,23%	0
No	25	59.5%	1	29	53,70%	1

Table 31- Do employees commit mistakes as a result of inadequate information

Feel good about working for this organisation	Small Company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Almost always	5	11.9%	76-100%	6	11.,12%	51 to 75%
Often	9	21.5%		19	35,18%	
Sometimes	25	59.5%		2	3,70%	
Rarely	3	7.1%		0	0%	
Never	0	0%		27	50%	

Table 32- The frequency employees feel good about working in that organisation

Small Company			Large company		
What makes employees feel good about working in the organisation	No. of answers given by employees	Manager	What makes employees feel good about working in the organisation	No. of answers given by employees	Manager
Near home	1	0	To have a job	9	1
To have a job	3	0	Collaboration	1	0
To know the bosses	1	0	Type of tasks	3	0
Type of tasks	3	0	Work Environment	6	0
Salary	3	0	Pay me on due time	3	0
Pay me on due date	7	1	Contact with co-workers	2	0
Contact with others	2	0	Co-workers	6	0
Co-workers	12	0	Follow work laws	1	0
Timetable	1	0	Stability	3	0
Production-line supervisor	2	0	Respect	1	0
Task difficulty	3	0	Organisation	3	0
Comprehensive bosses	3	0			
End of the year party	1	0			
Work conditions	0	1			
Extra compensations	0	1			

Table 33- The characteristics that make employees feel good about working in that organisation

Small company			Large Company		
What makes employees feel bad about working in the organisation	No. of answers given by employees	Manager	What makes employees feel bad about working in the organisation	No. of answers given by employees	Manager
Lack of dialogue	5		Lack of dialogue	2	
Lack of organisation	6		Work environment/ conflicts	3	
Lack of patience to teach	4		Heat	1	
Work environment/ conflicts	7		Low salary	1	
Lack of support	3				
Timetable	1				
Lack of co-workers collaboration	1				
Noise	3				
Too hot (heat)	3				
Low salary	1				
Lack of space	1				
Differences in treatment	1				

Table 34- The characteristics that make employees feel bad about working in that organisation

Proud about working in the organisation	Small Company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Almost always	3	7.1%	26-50%	20	37,03%	76 a 100%
Often	3	7.1%		5	9,25%	
Sometimes	29	69.1%		23	42,59%	
Rarely	4	9.6%		6	11,10%	
Never	3	7.1%		0	0%	

Table 35- The frequency employees feel proud about working in the organisation

Employees knowledge about the organisation	Small company			Large Company		
	No. Of answers given by employees	%	Manager	No. Of answers given by employees	%	Manager
When it was founded	5	11.9%	1	10	18,51%	1
Main clients	25	59.5%	1	8	14,80%	0
Type of clients	12	28.5%	1	3	5,50%	0
Company policies	12	28.5%	1	11	20,37%	1
Company owners	31	73.8%	1	19	35,18%	1
All company products	6	14.3%	1	5	9,25%	1

Table 36- Employees' knowledge about the organisation

All the information employees would like to have	Small Company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Yes	20	47.6%	1	19	35,18%	0
No	22	52.4%	0	35	64,82%	1

Table 37-Do employees have all the information they would like to have

Buy the company products	Small Company			Large Company		
	No. Of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Almost always	0	0%	25-50%	0	0%	0 a 25%
Often	1	2.3%		4	7,40%	
Sometimes	8	19%		22	40,74%	
Rarely	7	16.7%		13	24,07%	
Never	26	62%		15	27,78%	

Table 38- The frequency employees buy the company products

Communication with supervisor in the previous month	Small company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Yes	20	47.6%	1	18	33,33%	1
No	22	52.4%	0	36	66,67%	0

Table 39- Did employees communicate with any supervisor in the previous month?

No. of times this happened	Small Company		Large Company	
	No. Of answers given by employees	Manager	No. of answers given by employees	Manager
1.3	16	Difficult to say	15	Difficult to say
4.6	2		2	
7.9	0		0	
More	2		1	

Table 40- Number of times employees communicated with any supervisor in the previous month

Subject of employer-employee communication	Small Company	Large Company
	No. of answers given by employees	No. of answers given by employees
Family	6	4
Meetings	0	3
Salary	1	2
Work performance	5	14
Time	12	1
Weather	1	1
Personal things	4	4

Table 41- Subject of employees-supervisor communication in the previous month

Methods used to communicate	Small company		Large Company	
	No. of answers given by employees	Manager	No. of answers given by employees	Manager
Face-to-face	19	1	13	1
Via a Memo	0	0	0	0
Meeting	2	0	2	0
Phone	0	0	4	0

Table 42-Methods used by employees to communicate with supervisors

Organisation care about what employees have to say	Small Company			Large Bompany		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Almost always	2	4.8%	0	3	5,55%	0
Often	4	9.6%	0	4	7,41%	1
Sometimes	12	28.7%	1	12	22,22%	0
Rarely	10	23.5%	0	8	14, 81%	0
Never	14	33.5%	0	27	50%	0

Table 43- The frequency the organisation cares about what the employees have to say

To move inside the organisation	Small company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Yes	34	81%	0	17	31%	0
No	8	19%	1	37	69%	1

Table 44- Employees' freedom to move inside the organisation

Control of employees' work	Small Company			Large company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Yes	41	98%	1	49	90,70%	0
No	1	2%	0	5	9,25%	1

Table 45- Is employees' work controlled?

Forms of control	Small Company			Large Company		
	No. of answers given by employees	% (41)	Manager	No. of answers given by employees	% (41)	Manager
Pace of work	24	58.5%	1	22	44,89%	1
No. of pieces	35	83.3%	1	32	65,30%	1
Times you go out	11	26.8%	0	7	14,28%	0
Times / toilet	4	9.8%	0	5	10,20%	0
Others	2	4.9%	0	10	20,40%	0

Table 46- Forms of control used by the organisation to control employees' work

No. of breaks allowed daily	Small company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
0	0	0%		1	1,70%	0
1 a 3	39	92.9%	1	51	94,40%	1
4 a 6	1	2.4%	0	1	1,70%	0
More	2	4.7%	0	1	1,70%	0

Table 47- Number of breaks employees are allowed to take every day

Nature of these breaks	Small Company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Coffee	18	42.9%	1	17	31,48%	1
Lunch	37	88.1%	1	14	25,92%	1
Toilet	33	78.6%	0	17	31,48%	1
Telephone	2	4.8%	0	4	7,40%	0
Rest	5	12%	0	3	5,50%	0
Others	5	12%	0	0	12%	0

Table 48- Nature of the breaks, employees are allowed to take every day

Challenge a superior because something is wrong/unfair	Small Company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Yes	7	16.7%	1	5	5,50%	1
No	35	83.3%	0	49	90,74%	0

Table 49- Employees' feeling of freedom to challenge a superior when something is wrong or unfair

In meetings do employees have a voice	Small Company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
Yes	32	76.2%	1	31	57,40%	1
No	10	23.8%	0	23	42,60%	0

Table 50- Do employees have a voice in meetings?

The process of decision making	Small Company			Large Company		
	No. of answers given by employees	%	Manager	No. of answers given by employees	%	Manager
0% of centralisation	0	0%	0	0	0%	0
20	4	9.5%	0	4	7,40%	1
40	21	50%	0	2	3,70%	0
60	9	21.4%	1	3	5,50%	0
80	7	16.7%	0	21	38,80%	0
100% of centralisation	1	2.4%	0	24	44,40%	0

Table 51- The centralisation/ decentralisation of decision making

Appendix I

Letter sent to the organisations

Carmencita Esteves Flores
R.João Penha
N.º 38, 2º Esq.
4490 Póvoa de Varzim
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cflores@mail.telepac.pt

Subject: Academic study about communication and stress

Dear Sir(s)

I am doing research for my PhD in the area of communication and stress. These are two important areas that contribute to the development of this type of industry. This is unfortunately an under-researched area in our country and it is my intention to try to fill this gap.

This study only has academic purposes, but it can help you to better understand your organisation and your employees. It is not my intention to use the name of your company and all the results and analyses will be used with strictly confidence and only with academic purposes.

To develop my study I only need a group of employees' answers to a questionnaire that can be answered during their breaks. I also need to visit and observe the production line so that I can analyse non-verbal communication. I will not to any extent interfere with your employees' work.

I believe it would be important for us to talk so that I can explain this study in detail, and so that I can show you all the advantages your company has in participating in this study.

Thank you for your attention. I hope to hear from you soon

Yours sincerely

Carmencita Flores